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The Rife Beam Ray

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## BACK IN PRINT RESEARCH TITLES

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## BORDERLANDS

## A Quarterly Journal of Borderland Research

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## VIEW FROM THE BORDERLANDS

## **Editorial**

BY now, many of you have probably heard of the passing of Christopher Bird, one of the great borderland researchers of this century. Christopher Bird's works include The Divining Hand (a history of dowsing), The Persecution and Trial of Gaston Naessens, and, of course, his coauthorship of Secrets of the Soil and The Secret Life of Plants. The Secret Life of Plants has given renewed inspiration to many borderland researchers as evidenced by the recent revival of plant related experiments. A few weeks before his death, I spoke with Christopher Bird about a new book he was working on tentatively entitled, The Secret Life of Water. We've learned recently that the book was almost finished, and will be completed by his widow. Mr. Bird was an exceptional writer and researcher, and his works will continue to be revered by the curious reader and qualitative scientist for years to come.

In this issue, Trevor James Constable returns with some exciting updates on his weather engineering technology with the article, "Whither Weather Engineering". Trevor's outstanding work in the field of weather engineering has proven without a doubt that the ether does exist and is directly accessible with simple geometric instruments. New advancements in the field indicate that effects on the weather can now be had in under 20 minutes!

Back in 1992, Randolph Fabian Directo gave us the historical "Field Generators" article. This time, he extends his knowledge of the Vital Force in, "Homeopathy: The New Knowledge". The modalities of health in homeopathy and radionics are defined with an emphasis toward their union.

Be sure not to miss the book review by Peter Lindemann on Dr. Bare's work, Resonant Frequency Therapy: Building the Rife Beam Ray Device. Here, at last, it seems someone has really recreated the Rife instrument. This will surely change the way we look at what is and has been offered in the way of "Rife Technology".

Former Director of BSRF, Tom Brown, writes on his observations between light and electricity. He clearly explains the differences between Goethe's and Newton's theory of colors, with a lot of insight into the nature of natural and unnatural forms of electricity.

Michael Riversong returns again with, "Directional Anomalies". Here, Michael details many places where even people with a strong sense of direction become completely disoriented.

Gerry Vassilatos gives us his fifth biography — this time on Nikola Tesla. I found this to be one of the most informative and complete biographies of Tesla ever written with many little-known jewels of information. Stay tuned for Part 2 in the next issue.

Peter Lindemann's experiences with the recent fires in New Mexico and Arizona reveal some very disturbing information on a new etheric phenomenon. The "Dome Fire" he describes was acting like a huge radionic broadcaster with a radioactive element!

Some of the most interesting developments in dowsing are related by Bill Cox in the article, "Earth-Chi (Life Force) Energies in Motion". "Dragon Lines" are discussed over Ley Lines.

Note the new column, "The Borderland Experimenter". In future issues, this series will cover the basics of many experiments and borderland topics.

Michael Theroux Editor

## Clips, Quotes, & Comments

## More Mystery Stone

The last issue was fascinating as usual, and a great cover. I particularly enjoyed the article on Roy Rife. But my curiosity was really piqued by the letter from Yehoshua Ben-Tzawdoq of Atlanta regarding ancient Israelites in North America. It would be great if you could coax him into writing a full article on what he knows.

By the way, I checked out your web site, and found it very informative. I like the way that you have classified books. Keep up the good work.

- B. M., Toronto, Canada

## Interstellar Communications

I am writing to you in regard to the article titled "Interstellar Communications Signals" by L. G. Lawrence, in your First Quarter 1996 issue of *Borderlands*.

I must say that I was very surprised to read this article published currently.

I first read this article in the January 1976 copy of Beyond Reality magazine. Actually, I came across the copy in 1994. I found it most interesting and, since I have been in contact with a radioastronomer in the Ukraine for several years, I knew he would be interested as well. Of course, the most interesting point (to both of us) was the comment that a copy of the October 1971 tape had been deposited with the scientific archives of the Smithsonian Institution, Washington, D.C. as physical evidence of what might well be an extremely important historical event for generations yet to be born.

Of course, I wrote to the Smithsonian Institution to inquire about this historical tape and the Ecola Institute, hoping to pass on some interesting and valuable information to my friend in the Ukraine.

I received a letter from Mr. Paul K. McCutcheon saying that he checked all the files on the CETI programs, books about transducers, and the International Aerospace Abstracts but found nothing relating directly to the Ecola Institute research. He

also checked with the Smithsonian Astrophysical Observatory Library in Cambridge, MA plus several directories of organizations including Research Centers Directory and other related societies, and found no information on Ecola or the tape which is (reportedly) in the safe-keeping of the Smithsonian. He suggested I contact NASA headquarters, giving me an address and phone number, which I did. They claim to have no knowledge of Ecola or the tape.

I have several friends who have always lived in CA. They could find no information. I would be more than grateful if you could put me in touch with Mr. Lawrence and, in turn, perhaps a most welcomed communication with my friend in the Ukraine. Thank you.

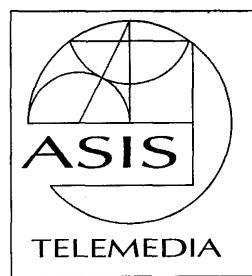
- L. W., Damariscotta, ME

We too searched... and came up with nothing. I understand that Mr. Lawrence has since passed on, and we have been unable to locate anyone who knows the whereabouts of his equipment or notes. We're still searching though, and will keep you posted as we find out more information. Based on the information we do have (from his published works), we have set up a small research facility, and we'll be discussing

our findings in the next issue. If any of our readers have information on this subject, we would be most grateful for your contributions.

## **Vril Priority**

After reading several of the VRIL compendiums, pouring over many of Rudolf Steiner's lectures and practicing Huna Magic, I have the following comments. To start, VRIL seems to be given the status of a living being, i.e., following Tesla around. I submit it is not exclusively the VRIL, but Spirit Beings whose forces yield up the VRIL. Steiner would have similar things to say. See The Occult Movement Nineteenth Century, p.147, 156, 161. Here are descriptions of Spiritual Beings who operate beyond the veil of nature. These Beings are what did Wilhelm Reich and Nikola Tesla in. Why? These Beings are mortal enemies of nearly all humans. They influence people in such a way that logic and reasoning have no effect on them (the people). "Obliterate the human and their works" is their motto. This is what happened to Tesla and Reich. To be blunt, Tesla and Reich broke through the veil of nature without the realization of the response from these beings that would



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be directed at them.

VRIL seems to be given the status of primary, even over the etheric world. I propose that VRIL is the result of the life ether falling into matter. In Steiner's Etherization of the Blood, he mentions what results when various ethers fall into matter. Magnetism results from the chemical ether falling into matter and a very powerful force when the life ether falls into matter. This sounds like VRIL. As far as I have read and understood Steiner and Blavatsky, the pure Spiritual World is primary. See Steiner's Agriculture. He speaks of ether and astral forces and how to employ them in agriculture. Here is where confusion comes in. The mineral world has no etheric body, but does have an astral body. Now near as I can figure it, the astral body possesses far greater power to influence the world of nature than the etheric. Blavatsky says the same thing in ISIS Unveiled and The Secret Doctrine. Here is where I think homeopathy makes a mistake and lumps all the forces from plants and minerals together. Blavatsky would not have done this.

Are there other indications of a spiritual world from hard science? In a recent issue of Analog, there was an article about Bose-Einstein Condensation. The article described two kinds of particles, fermions and bosons. Bosons work in groups and fermions are individualistic. I submit that here are the end results of Ahriman (groupies) and Lucifer (individualistic). These would be the two great powers dominating mankind.

Name and address withheld

Great confusion exists concerning vril and "ethers". This unfortunate confusion is principally due to excessive studies in Steinerian science, which places primary emphasis on ethers. Vril is generative, and the interaction of vril and inertial space is what produces the ethers. The main energetic identification of vril is its eidetic content: imagery which is experienced in proximity with vril projectors, i.e., grounded radionic instruments. Ethers are devoid of eidetic content. Ethers, properly defined, are produced as shockfronts where vril penetrates inertial space. These shockfronts are zones of cavitation and dissolution. In

them we find displays of light, heat , chemical activity and the like. Dr. Steiner made improper use of the term "ether" when referring to the various strata in which light, warmth, tone, and vital manifestations were observed. Steiner should have used the word "quality" in describing these four strata, eliminating the erroneous and confusing terminology. "Ethers" are gases; chaotic, disorganized, and incapable of formative effect. Qualities, used in the arcane sense, are more fitting in regard to Steinerian concepts than the term "ether". Qualities then, are vril projections, the continuities which we can experience. Vril projects image, meaning, matter, and organisations in that order. Vril is equated with qualities, not ethers. G.V.

## Music and Natural Resonance

I enjoyed very much the latest edition of Borderlands (Vol. LII, No. 1). My commendations to the editor on providing an increasingly satisfying magazine which covers a wide variety of interesting subjects. One subject I am particularly interested in was touched upon by Michael Riversong in his article, "Music and Natural Resonance." The subject of music as a manifestation of natural resonant principles is an important one and is necessary for the understanding of fundamental "life-force" energies in that these energies are made physical, i.e. they are available to our normal sensate experience. Thus, the effects of music to rejuvenate, heal, evoke a particular response, or weaken should be directly observable.

Mr. Riversong attempts to demonstrate the varying effects of music by describing an experiment that was done using a kinesthetic arm test. The results of the test seem to indicate that subjects test "strong" on classical Baroque music while testing "weak" on the Jimi Hendrix (rock/blues) selection. I suspect that the results of this test rely not so much on the resonant principles of the music itself, but on the demographics of the test subjects. Although not much detail is given as to the demographics of the test subjects, judging from the fact that they were drawn from churches and social service clubs it would seem that they consisted of a very narrow demographic group. Do

the test on a group of High School teenagers or members of jazz big bands and compare the results. I would suspect the results to be wide ranging.

The examples of music which are "limited in scope" tend to be very general. "Death Metal, Rap, and Reggae Dub" are listed as "harsh, grating, and having a limited sphere of tools available." I disagree with this lumping together of musical expressions which, in their own context, can serve to fulfill a spiritual or emotional need. Although I would be hard pressed to find an example for Death Metal, I can say that Rap music as well as Reggae Dub (which essentially are variations of the same thing; human voice accompanied by pre-recorded music being manipulated via two turntables or DAT) does qualify as a form of music that is unjustly stigmatized in our society. Stemming from the African traditions which eventually led to Jazz, R&B, and Spirituals, the music is a direct connection to the "soul" via vocal expression. Also related are the rhythm traditions of Africa where the drums also serve as a "voice" which can speak complete languages. This "speech", comprised of tones and rhythm, being the key part of many religious drumming traditions. Although harmonically this music is not optimal, rhythmically it has the power to evoke the full spectrum of emotions as well as the power to heal, if not the body than definitely the soul.

I would also like to comment on the notion that "hard rock" music contains a "negative" rhythm, being the opposite of the human heartbeat. I find it hard to accept the statement that this rhythm will "always" provide a negative effect. It is in relation to the other rhythms which provide the basis for analyzing the qualities of the rhythm. For example, the music of the Yoruba contains the aforementioned "negative" rhythm yet it is one of many simple rhythms which are combined to form a tonal and rhythmic composite which transcends the sum of its parts. It is also in relation to the other tonal and rhythmic aspects of today's Rock or Jazz music in which this particular rhythmic pattern gains significance.

For the most part I agree that much of today's music is void of true spirituality. I

## BORDERLANDS CQC

believe there are harmonic, rhythmic and melodic patterns which provide a healthier resonance. Yet I feel that the examples of "negative" music stated in the article are inconclusive and, at best, vague generalizations. My respects still go out to Michael Riversong for at least providing food for thought on this fascinating aspect of musical appreciation.

- B. M., New Orleans, LA

## News

New Clues Add Doubt to Byrd's claim of North Pole Primacy

WASHINGTON — Richard E. Byrd, the famed American polar explorer who claimed to have been the first person to fly over the North Pole, may actually have turned back two hours and 150 miles short of his goal, according to new evidence released by Ohio State University's Byrd Polar Research Institute.

The clues are in Byrd's long lost diary of the expedition, which an archivist at the center recently found in a mislabeled box of Byrd's memorabilia. The diary contains navigational notes that Dennis Rawlins, a Baltimore navigation expert and historian of polar Expeditions, has interpreted to mean that Byrd failed in his attempt at the pole even though he claimed to have reached it

One incriminating finding: The diary contains an erased — but still readable — sextant reading that put Byrd about 165 miles south of where he would later claim, in his official report, to have been at that moment toward the end of the flight north. — Los Angeles Times, May 10th, 1996

Ed. Note: The info from this clipping is not significant for whether or not Byrd failed in his attempt to reach the pole, but for the discovery of his long lost diary. It is claimed that Byrd discovered the entrance to the hollow earth on his February 19th, 1947 flight over the pole, and much of this information comes from the book, "A Flight to the Land Beyond the North Pole:—The Missing Diary of Admiral Richard E. Byrd" published by Innerlight Publications, 1990. It would be very interesting to compare the two "alleged" diaries, but it is doubtful that they would resemble one another in content.

Keep those letters, photos, and clippings coming! Please write to Borderlands CQC, P.O. Box 220, Bayside, California, 95524 USA. Letters may be edited for length and clarity.

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## Whither Weather Engineering

What Might Be and What Might Not

by Trevor James Constable

INCE the publication of LOOM OF THE FUTURE in 1995, many people familiar with my pioneering in etheric weather engineering, have inquired what is in the offing for these powerful and valuable techniques. Etheric weather engineering is certainly usable today in dealing effectively with smog and drought, even if total on/off mechanical repeatability has yet to be achieved. Such repeatability may never be attained in dealing with the etheric continuum, but that is no excuse for not utilizing what is already more effective than current official practises. Existing conventional smog techniques certainly do not have mechanical repeatability, or efficiency. Cloud seeding is light-years from any such standard of dependability, and does not rise above chemical insult to the atmosphere.

What is practicable today in etheric weather engineering is considerable, and of high intrinsic value. Most persons in authority are nevertheless unwilling to deal with unconventional technology, even in crisis situations that have bankrupted formal approaches. Government regulations in some administrations even prohibit the use of unconventional technology. Great continental droughts like the African tragedy, are simply allowed to run wild. Conventional technology is useless in such disasters, and will remain so.

Scientists who are familiar only with officially-accepted denials of the ether's existence, are bemused by the sudden emergence of the ether not only as a physical reality, but also as the BASIS OF A TECHNOLOGY. This is a massive psychological problem to surmount, because the uninitiated person's world view comes under direct attack, no matter what his eminence. "Scientific objectivity" is blown to the winds in such circumstances, because in most cases reaction to compelling video evidence of etheric



Geometry is everything!" So says Trevor James Constable in Hawaii at New Year 1995 during early successes of Operation Red Baron. BSRF member George Wuu of Singapore funded the pioneering project to use and test etheric weather engineering from an aircraft — a world "first" in new technology. TJC always harps on the role of geometry: "The right geometry in your translator accesses the ether physically. The right direction of translator action at the right velocity, ensures etheric reaction." The physical atmosphere, according to TJC, is the slave of the ether.

engineering's power is anything but objective.

Time-lapse video tape of local weather being manipulated, at horizon distance, usually evokes neurotic reaction rather than healthy, rational curiosity and objective interest. Past experience of such response is likely to repeat itself for a long time to come. The usual scenario is that a forward-looking and enlightened personage in a government or a large corporation, suggests in an extreme, and perhaps devastating situation, that etheric weather engineering be tried. All conventional agencies have already been exhausted in such a scenario. The votaries of the conventional approach have been defeated by the problem at hand. The IDEA of using etheric weather engineering is nevertheless immediately swamped by a flood of opposition and ridicule from formally-trained scientists whose personal world view — to paraphrase Sam Goldwyn — includes the ether out.

The proposal is thus stillborn, or strangled at birth.

As a consequence, open and clear-thinking people who are externes to such processes, are often nonplused by the paralysis that seems to grip this field. Unblocked themselves, they think that the rest of humanity is the same. In a world whose miseries are both massive and multiplying, a modality with the clear capacity to mitigate inexpensively much of this suffering, lies unutilized. The whole thing seems cockeyed, like so much else in today's world.

Etheric weather engineering is both avoided and evaded, anywhere it can further prove itself in a practical setting. This process is called <u>sequestration</u>, a term first employed in this general connection by the late Dr. Wilhelm Reich, who thoroughly understood the behavioral rooting of human evasion of the essential. Such evasion of the essential prevails today. Study of Dr. Reich's clinical findings clarifies why this is so. Dr. Reich also elucidates the crucial need to stop raising neurotic human beings who are spastically averse to life-giving principles, and who remain so throughout their own lifetimes.

Explaining the sequestration of etheric weather engineering requires the resources of borderland science, which directs attention to the novel, the nascent, and the unorthodox. One has to utilize knowledge and information that is also evaded by our anticivilization. Especially is this so since the problems involved largely spring from the human behavioral dysfunctions that have created, and which largely sustain, the anticivilization that mirrors these dysfunctions. Transformation of our anticivilization, which is already making its first stirrings, will accelerate when the age of etheric power unfolds, and thereby hangs a tale.

Introducing anything that is radically new, in any field, always provokes knee-jerk resistance from the status quo. Innovations far simpler than weather engineering have always been greeted this way. Since long before the bow and arrow, this situation has been a fixture in human affairs. A vivid example of it in the twentieth century, was the way that the machine-gun swept cavalry from the battlefield. Emotionally-blinded cavalry generals could not see what was in front of them. Even their native common sense was nullified by their neurotic attachment to their horses, and to the romance of horse soldiering. They could accept the machine gun's transformational power only after men and horses were mowed down by the hundreds in front of them. The horse cavalry died hard even then, and its influence endured in high army commands for decades.

Resistance of this kind is part of life. One expects it. Persistence combined with the profit motive, has nevertheless permitted many useful innovations to come into the world to serve us. Developments intended to sunder, sear, and suffocate human beings get a warmer welcome from our anticivilization, with lavish finance provided for further development. Never let it be forgotten however, that many good men with great ideas were exhausted in the labyrinths of bureaucracy, while others were shafted, ruined, and drained by corporate value vampires. Other innovators, after lives in penury pursuing their dreams, succumbed to the bribes of the selfish, humanoid bloodsuckers who abound on the earth plane. These despairing innovators sold out by forgetting — for money — that they ever had a dream. The historical records of these happenings are numerous. They all deal nevertheless, with relatively minor developments.

The etheric weather engineering that now awaits in the wings of the world stage, is of a much more formidable and pervasive dimension. Fundamental revolution is inherent in this development, which will spread irresistibly into the etheric powering of our entire civilization. Such far-reaching changes are as certain as sunrise. Of course, we will have to wait longer than the next dawn to see etheric power unfold, along with the drastic social, economic and political changes that the advent of the etheric age will force.

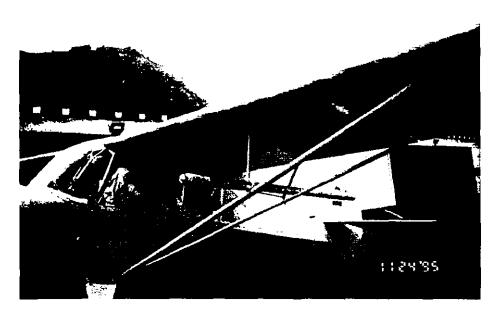
Accessing technically, and technologically employing etheric force is thus no single, straightforward invention — like a 100 mpg carburetor — but the trigger for stupendous changes in the life of mankind, dwarfing all that has gone before. To expect that such a mind-boggling quantum jump will be greeted with open arms by our anticivilization, is not rational. Remember the cavalry.

Everyone already knows, <u>subconsciously</u>, what etheric technology portends. For the first time, the external works of human beings are about to touch the roots of life. This inchoate knowledge frightens human beings who are locked in armored bodies. This radically influences human behavior — mostly into Life-negative formats. Decades of evasive verbalizations will rationalize endless delays in getting to official technical grips with the new realities. Even now, this all looms in contemporary life, as politicians and bureaucrats clearly prefer drought and forest fires to dealing with these things effectively via today's etheric technology. As vegetatively dead professors cram the lie that "there is no ether" into another generation of young heads, the roar of the greatest watershed in human history can be heard by all perceptive men and women.

Suppression, sequestration, and evasion are about all that may be rationally anticipated from most of the current crop of humans in authority. They have a vested interest in maintaining the current complex hoaxes that undergird our anticivilization. One cannot rationally anticipate any official support or interest any time soon.

In the coming decades, the advent of etheric power will probably follow the same route I was forced to follow long ago, to get etheric weather engineering into the world as a beginning. On a much broader front than has been feasible for me, determined men and women will get their hands and their wills and their soul forces into building stuff that WORKS. These people will be the true elite of tomorrow's humanity - gifted, determined and incorruptible. They will be less concerned with conventional compliances - scientific, technical, political, financial, commercial and neurotic - than they will be with an entirely new ordering of life. The means to bring this about will be in their own hands furthermore, because they will have themselves midwifed what is needed for the task. No power on earth will be able to stifle or subvert these developments for long. The full power of evolution stands behind them. The emergence of an all-new financial approach will be part of this coming era.

The tyrannies and despotism of the old order and its parasitic elites, will never be overcome by head-on battles. No such struggles can be fruitful. Only the indirect approach will succeed. Once the etheric dam breaks, and an inspired inventor makes the KRW of Reich – the <a href="kreiselwelle">kreiselwelle</a> or spinning wave – spin a shaft, all will change. Etheric science and technology will by their very nature strategically circumvent the greedy and the selfish, the dishonest lords of anticivilization. Already this is foreshadowed



## "Tesla-Bull"

Many variants of the basic "Bull" device were tested during Operation Red Baron. This is the so-called Tesla-Bull, 5.84 geodetic feet in length, the same length as the antenna used on Tesla's electric car in 1931. With a larger bore than a standard Bull, this variant softened and widened atmospheric response in its first tests. More work will be done with the Tesla-Bull in the future. Col. Willy Schauer can be seen buckling himself in to the Aeronca prior to takeoff from Dillingham Field in Hawaii.

## Historic First

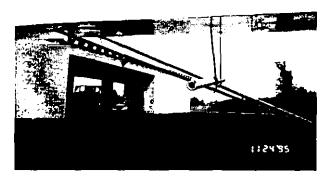
Colonel William A. "Willy" Schauer USAF Ret. First pilot in history to fly etheric weather engineering missions, Willy Schauer is a veteran USAF fighter pilot with over 30 years service. Willy flew all missions in Operation Red Baron, in which TJC used airborne etheric translators for the first time. Red Baron showed conclusively that more etheric response could be evoked faster from the air, using the new Bull translators, than by any other method yet developed.

TJC describes Willy Schauer as "an elegant pilot with outstanding, phenomenal powers of observation. I could have spent years finding such an alert, sharp, and gifted pilot. Somebody up there must like what I am doing."

Schauer himself says that he cannot explain the responses produced by less than 20 minutes flight on a single vector. "I don't have the faintest idea of why it happens, but it happens" he says.

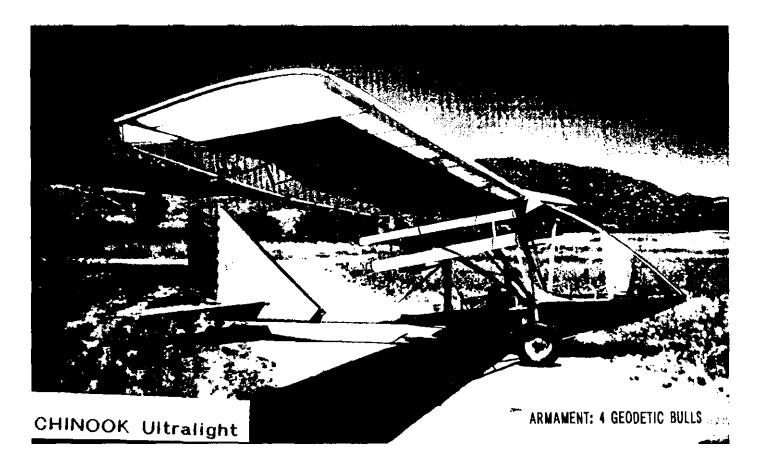






## Tesla Rides Again — On A Wing Strut

Nikola Tesla's 1931 electric car used an antenna 5.84 geodetic feet in length — the dimension used in this variant of the Bull. Note that the trailing end of the device is OPEN, while the forward end is closed and sealed. This is an airborne application of Wilhelm Reich's classical weather engineering dictum: always point the cloudbuster in the opposite direction from which you want the rain to come. In airbone application, this way, the rain comes, after less than 20 minutes on a single vector.



## Going Ultralight

The Bull translators shown on this Chinook ultralight in southern California are artist's drawings, but illustrate how this aircraft will be used in 1996 tests. Hawaii provings established that great speed is unnecessary, and that successful airborne operations are likely to be short and sharp. Nor is great altitude necessary to engineer rain. Ultralights can operate with great freedom away from cities, and do not need full-fledged airports and traffic control facilities. Placing a camcorder aboard gives them more documentation power than was carried by a World War II B-17 Flying Fortress.

economically in conventional business, as entrepreneurial minicompanies with new technologies, begin running rings around corporate giants -commercial dinosaurs whose days are numbered. Pure terror permeates the executive offices of many big corporations today, as parasitic presidents and vice-presidents tremble before the coming of the axe.

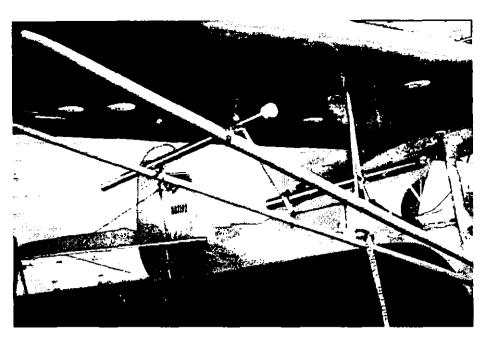
Etheric weather engineering is a technology based from Day One on the existence and technical accessibility of the ether. This engineering art has reached practicability of value and utility. These qualities may be seen in its ability to mitigate some horrendously expensive processes that presently run amok not only in the U.S. economy, but also worldwide. These are processes for which the conventional and orthodox approaches have no adequate counter. Reversing drought is an obvious, here-now application. Developing and applying diversionary techniques against hurricanes, and initiating and installing permanent anti-hurricane measures, is another. The minimization of wind damage is a practical reality that could be applied via simple, inexpensive and permanent installations in such afflicted areas as southern California, with its destructive Santana [Santa Ana] winds.

My technical opinion is that simple airborne devices could be

soon developed that would <u>collapse tornadoes</u>, and greatly ease the impact of this curse on the USA. The monstrous forest firefighting bill sheeted home annually to US taxpayers is in excess of \$750 million. Etheric weather engineering is able, with its latest developments, to help counter this immense national waste, and probably cut it down by hundreds of millions of dollars annually. This can be done for peanuts.

Most forest fires can be decisively influenced toward control by certain weather changes. Elevating humidity levels and engineering favorable windshifts can be especially effective. Practical airborne tests in Hawaii using the new "Bull" etheric translators, have shown that a light aircraft so equipped and appropriately used, can produce more etheric response, faster, than any other development thus far of this engineering art.

An aircraft provides a much "longer" horizon than a ship or an automobile. Even at 500 feet altitude the line of sight is enormously extended, and so is the area ocularly observable. The greater speed of an aircraft, vis-a-vis a ship, is a big advantage, although high speed is not desirable at this stage. Infinite control of the aircraft's heading is of decisive value in making the engineered rain go where the engineer wants the drop. Ability by air to access and



"Negative"Bulls — 1994 Operation Red Baron, Hawaii

Stainless steel clamps are the preferred method of attaching these negative Bulls to an aircraft. These PVC devices are sheathed in thin metal. Outboard Bull is sheathed in stainless steel, inboard unit in aluminum. Negative Bull is actually a reverse cylindrical etheric energy accumulator. Design is intended to REDUCE etheric potential within the Bull. Dimensions, orientation and velocity such translators produce etheric response quickly and unequivocally. There are extended physical effects from their airborne use, repeatedly demonstrated in Hawaii. High liability potential resides in these extended effects, which ate a totally new aspect of etheric weather engineering. Future possibilities for new designs and improved methods are virtually without limit. BSRF member George Wuu of Singapore funded Operation Red Baron.

influence thousands of square miles in a few hours, has rendered fixed-base operations obsolescent. Airborne operations using light aircraft or helicopters are the most potent means of weather engineering, at present technical levels. This particular development has a virtually unlimited future.

Tests have been conducted out of Dillingham Field in Hawaii, in rural northwestern Oahu, using a vintage Aeronca high-wing monoplane, fitted with the new "Bull" etheric translators. This venture was christened OPERATION RED BARON. Results were dramatic, island-wide and protracted. There were farreaching consequences — and several convincing repetitions of them — that dare not be detailed, for the most cogent liability reasons. Suffice it to say that the overall scenario eradicated all doubt as to the high value of airborne weather engineering operations. THESE RESULTS ENSUED FROM LESS THAN 20 MINUTES FLIGHT TIME ON A SINGLE VECTOR. The etheric translators employed were less than four feet long and weighed less than two pounds. No chemicals or electric power were utilized, just a combination of geometry and velocity, which is the essential character of etheric weather engineering today.

Application of these developments to mastering forest fires is direct, and would surely prove itself in short order via results. Only

results count — or should count, if one accepts as doctrine the myth of human objectivity. A quarter century of practical work with weather engineering has taught me that humanity is highly resistant to being "saved". Many specious factors other than merit govern what is accepted, what is developed and what is financed. Our downskidding anticivilization endorses and sustains many activities, programs and organizations that are without true merit.

Highly varied political factors impinge strongly on the future of etheric weather engineering. Influencing wind direction and humidity levels to bring forest fires under control is a case in point. This is a here-now capability ready for practical trial and further development, at nominal cost. BUT - there are numerous people in America who actively promote forest fires, to the point of deliberately setting such fires if they do not erupt on their own. They are people who have a vested financial interest in America's \$750 million per year forest firefighting industry. Such criminal arsonists are a major problem for government authorities, both state and federal, in forested regions of the U.S.A. In the southeastern U.S., for example, Allen Polk of the U.S. Forest Service has claimed that 90 percent of the fires on Federal land are deliberately set. The criminal "arson industry" would be vehemently opposed to etheric weather engineering, and would probably murder weather engineers as readily as they

murder forests. Such political factors cast shadows on the future of weather engineering in the near-term.

When I retired from the U.S. Merchant Marine in late 1992, some thirteen years of steady maritime weather engineering operations came to an end. Thereafter, I could do only very limited maritime work, with small, fixed units, via the kind offices of good friends still sailing as ship captains. This work was nevertheless highly productive, and showed that weather engineering work on fast, oceangoing ships also has an unlimited future. Particularly is this true of coastal regions of major land masses, e.g. the Pacific coast of North America. Actual results cannot be detailed, for liability reasons similar to those that enjoin silence concerning successful airborne operations in Hawaii.

The most recent maritime results were impressive, and affected many states. Technically speaking, drought need never again impact the Pacific Coast of North America, or any other littoral territory. A single fast ship operating with "Bull" units in coastal waters, can readily drench California, Washington and Oregon. Such effects can undoubtedly be wrought also with light aircraft, although this has not yet been actually attempted. Shipborne operations have been well-tested.

Airborne experimental operations will resume in 1996 in

southern California and Nevada, this time utilizing ultralight aircraft. The new etheric translators are so small and light that even the frail ultralights can carry a pair of them easily. In many ways, these remarkable ultralight machines are ideal for proving work of the kind currently necessary. The ultralights do not need an airport, and can be hauled on a trailer to any strategic site where it is legal for them to operate. Ultralights aloft provide an outstanding field of view. A camcorder gives them more documentation power than was carried by a B-17 Flying Fortress in World War II.

Video documentation of airborne operations has proved difficult in the past. The reason is that the effects of such operations are vast and not confined to segments of the horizon, geometrically determinable in advance. Video documentation eventually became easy in maritime weather work, as practical experience accumulated. Ways will similarly be found to document the effects of airborne operations, through intelligent persistence and practical experience.

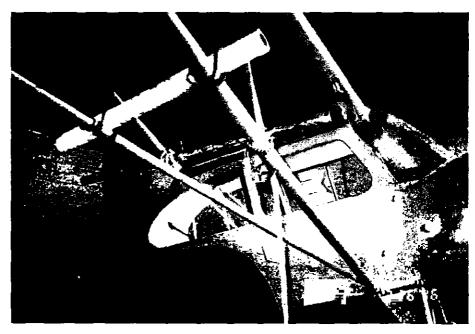
In February of 1996, RED BARON airborne weather engineering operations in Hawaii were documented by adding a follow up, video-equipped sailplane. First, the ancient Aeronca transited the target area on a standard rain engineering pass. A sailplane with unrestricted forward visibility

was later used to record from 2000 feet, that part of the stunning results accessible to this remarkable aircraft. The combination of TV weather forecast clips, contraforecast deluges, and aircraft and sailplane documentation made a compelling case. All this can and will be improved into an evidential bolus that will silence any skeptic living.

Sharp contrast exists between all this underfinanced pioneering and such lavishly-endowed official insanities as the current HAARP Project, so emblematic of our corrupt anticivilization. Our government is now paying scientists and large corporations to inject colossal wattages into the ether, whose very existence they deny. The American public is forced to pay for a technical enterprise of massive potential mischief, and of unknown outcome.

Our work meanwhile proceeds quietly, and with profound respect for the elemental domains on which our activities impinge, and on which they depend for results. We are aware of how involved we are with other realms of Nature than those formally "accepted". The ethers are the domain of elemental beings, for whom respect is appropriate in directly working these realms technologically.

How much time is likely to pass before etheric weather engineering, and its other practical functions, are taken up for human benefit? My personal expectation is that this will require at least 50 years, unless significant resources appear, which is highly unlikely. That much time will be needed for adjustment to the new



"Armament"

On February 1996 Red Baron test, Aeronca was fitted with four Bull translators, two on each wing strut. The white translator is a "standard" Bull, which is essentially a cylindrical etheric energy accumulator with an adjacent vacuum chamber. The core is of copper tubing. The second Bull is a so-called "Negative Bull", which has a PVC core sheathed in reflective material. This type also has a vacuum chamber. Contemporary Bulls are cut to geodetic measurements. No electric power or batteries, and no chemicals are utilized. The ether is manipulated by the geometry of the Bulls, the geometry of their insertion into the etheric continuum, and the velocity of the aircraft.

realities, and for further pioneer work to be done along the lines my team has started. A special situation may unfold that will accelerate this tentative timetable, but humanity's resistance to salvation is extremely dogged and tenacious, and should not be underestimated.

A dynamic sponsor may emerge, perhaps even before I leave the earth, although he will have to hurry. Such a sponsor-trustee will need capital, business acumen, persistence, and political and marketing savvy to navigate to the enormous wealth that these techniques can generate. No one can ever be, intrinsically, other than a trustee for any part of this work, which will never be "owned". A suitable entrepreneur will need to be of high moral character to be entrusted by the earth's Regents with the control of basic natural forces, and their commercial utilization by Man. Authentic venture capitalists like this are rare, but more will appear soon, as anticivilization crumbles.

Often I am asked if I think my life's work will be wasted and lost, buried by the forces of status quo. From the great teacher Rudolf Steiner, I learned that all such progressive activity has its good effect somewhere, and is ever lost. Karma leads us to what we do in this world, and our best course is to get on with our obvious tasks. Confidence that all is overseen, guided and supervised by beings who are a lot smarter than dishonest humans, eliminates concerns about this work being lost. Weather engineering will be an integral part of the human future.

## Homeopathy The New Knowledge

by Randolph Fabian Directo

approached Homeopathy first because I did not know what it was. I consider my knowledge of Holistic Medicine to be extensive since I have studied the natural, life-oriented principles of other brave researchers.

Hahnemann is no exception. His development of Homeopathy before Kent and Hering probably frightened most people. He successfully probed into those intelligent living functions of ours and derived a reliable sense of cure which seemed mystical. What mechanistic mind would not be threatened by this?

I cannot simply reiterate the works of any Homeopath to tell the reader how good Homeopathy would be for the general public. I cannot improve upon the texts which already prove the benefits. They also become less covert and more conventional as we head into the 21st century. A public which demands a personalized, natural form of health care will be supplied by the Homeopathic practitioners.

Unfortunately, the underlying principle of "like cures like" is not well known by the general public. I discovered for myself that less than half of the people in the pharmacies of my area know of Homeopathic medicine as of this writing. Only a definite interest in alternative medicine would have a person seek out the proper information and as such it remains esoteric-simply because it is withheld from the media at large, thus public scrutiny.

My interest developed long before this article. Throughout the texts, familiar ideas, terms, and names were bringing life to a connection between Homeopathy and the sciences which denote an etheric intelligence to the life force. The "Vital Force" of Homeopathy is no different from the life energy of Hatha Yoga, Chi Kung, Orgonomy, Light Harmonics, or other studies dealing with the same.

There is one practice in particular which has a direct correlation with Homeopathy. In terms of energetic functions an unmistakable relation can be made between the function of certain remedies. The function of Homeopathic treatment has its equivalent in another practice. I contend that this other practice is Homeopathic in nature.

The objective of this article is to prove the Homeopathic nature, thus the compatibility, of a sequestered medical practice which was far ahead of its time. Samuel Hahnemann was persecuted because of the controversial nature of the work, and jailed on a technicality. The fear generated in the scientific community was only equaled by the implications of a cosmic therapeutic system.

In order to prove this relation we must derive the true mecha-

nism of effect which applies to both systems. Only then can we have these two therapies meld within a practice. My approach is inductive as far as my observations and hypothetical operation within this article. The experiments should shine another ray of health upon humanity.

I wanted to know homeopathy to dissolve a mystery and I found myself in the familiar realm of bioenergetic functions. To the best of my ability I will present a mysterious, yet powerful form of medicine which a practicing homeopath may find indispensable.

## THE ANCIENT, INTUITIVE BALANCE

A science will evolve according to its researchers and its necessity. A medical practice will evolve according to its practitioners and the needs of his patients. Homeopathy has evolved as a formalized system of drug therapeutics — and an indicator of a much deeper phenomenon. There are many common denominators in nature which allow the sciences to be linked. We simply have to look for them.

Homeopathic practice is no exception. The ubiquitous acknowledgment of the Vital Force in all Homeopathic circuits is one of these common denominators. This coupled with the basic principles of the provings and potentizations allows the Homeopathic systems to be linked with other therapeutic systems which also rely on the natural healing force of the body.

As a reward some modern doctors and Holistic healers have taken advantage of this compatibility and added Homeopathy to their portfolios, so their patients experience a much broader horizon of health in contrast to regular medicine. Even the practitioners of alternate medicine have made a bold, brave choice in Homeopathy since the "potentization" or "dynamization" seems to contradict common logic. When studying the nature of things our common sense can only serve as frame of reference.

For example, Samuel Hahnemann's frame of reference was changed when he came across Dr. Cullen's quinine treatment of Malaria.<sup>2</sup> "Concentration equates effectiveness" was no longer the rule in his research — as it still is in conventional pharmacy. He proved that quality equates efficacy in the Homeopathic system. The form in which this quality takes place escapes the conventional sense simply because it seems contrary to the established system — especially since the key substance is completely absent in the higher potentizations!

Hahnemann's own desire and intuition to overcome the medical cretinism of his time allowed him to be receptive to new and better ways. In his waking to the new knowledge he developed Homeopathy. His wake was intuitive. His research process was inductive using empirical data because common sense told him, "Don't worry about how it works. If it works, use it!".

The latest research does bubble up the question of why it works since potentization has also been successfully applied to non-medical fields such as agriculture.<sup>3</sup> This is a further indicator of a deeper process in nature. Hahnemann suspected an immaterial force at work with an efficacy in proportion to the potentization.<sup>4</sup> There are a number of postulates on the underlying bioenergetic process. Barnard and Stephenson in the field of Quantum Chemistry suggest a form of "cloning" of the key substance throughout the solvent, but this does not explain the higher efficacy in proportion to the repeated succussion.<sup>5</sup> The frame of thought, in respect for Hahnemann, Kent, and Vitoulkas, equates the "Vital Force" with the all pervading ether of ancient science.<sup>6</sup>

## COSMIC BALANCE

Since this is the case, Homeopathy already has a solid foundation in the ancient studies of Bioenergy. For example, basic Chi

Kung theory states that the human body is the microcosm of the universe, therefore, the forces at work in the body are the same as those at work in the rest of the universe. This correlates with the symptoms induced by a potentized key substance matching the symptoms of a particular miasm or constitution. A potentization will have the tendency to reflect the reactions of the Vital Force against an ailment. A key substance will have its stabilizing effect in nature such as a plant protecting itself and the landscape with poison. All takes place to maintain homeostasis. In essence, the forces of homeostasis in the universe are

reflected within the bioplasm of the human body.7

Another principle which further aids the action of potentization is that this homeostasis is guided by two opposing forces throughout the universe. The idea of opposites is universal, but few understand that subtle interconnection which is related to Einstein's Unified Field Theory. This interconnection is likened to the opposing forces connected via a toroid (see Figure 1).

In the sense of Modern Relativity and ancient Chinese Cosmology, two like forces will push at each other. Given the proper momentum, the body, or system can be "pushed" into homeostasis, a dynamic state of being between the opposing forces. Yin and Yang should be equal within a person, but most people are too Yang as advocated by Oriental Medicine.

Before I knew of Homeopathy I came across a "potentization" from another science. The "Oranur Effect" is the most startling result to date. Wilhelm Reich, who was attacked much worse than Hahnemann, conducted experiments with the "all pervading

energy". His experiments with a one gram needle of radium caused some atmospheric "symptoms" which lasted from the early 1950's into the late 1960's. Purportedly, the 1960's peace movement in the states was a direct side effect of the experiments. The lab assistants who were affected showed immediate signs of radiation poisoning at first, but recovered with equal alacrity — and an immunity to further radiation sickness! In essence, the atmosphere was potentized, and the lab assistants went through a proving with the modalities of radiation sickness. Then their Vital Force "bounced" back into equilibrium with a most uncommon immunity. Dr. Reich even suggested this as a remedy in case of nuclear attack!

Potentization is a familiar concept in any science which involves harmonic resonance. Those of you unfamiliar with resonance can think of two pitch forks of the same frequency exchanging kinetic and potential energy in the form of acoustic vibration. This is analogous to the effect of potentization. Let us deduce the function of the effect even further.

When water is allowed to flow in a geometric spiral of contraction, the coincident radio axial movement allows the diamagnetic alignment of the water's molecular structure to that of the planet's.

The centripetence of water leads to an anomalous state which has an absence of friction, a levitation effect, and a temperature drop, yet biological improvement whence pathogenic bacteria dies. In essence, the quality of motion in water has a potentizing effect if in dynamic alignment with the self regulating forces of the planet. 10

In this sense, the succussion or trituration of a key substance within a compatible medium also allows the cosmic forces of equilibrium to have a dynamic influence. From the "Light Harmonics" perspective on the study of the world grid, we are constantly under the influence

of many subtle force fields which weave an original pattern of energy from the time we are conceived. This continuous, manifold interaction within the space-time continuum of the planetary grid determines the nature of our being. An infinitesimal number of energy patterns in proximity to each other creates an etheric weave of fabric in a dynamic equilibrium existing in congruity to all things. In essence, all things and people are harmonically related throughout the universe.<sup>11</sup>

This subject matter may be understood in terms of paramagnetism. The ferromagnetic structure of an iron rod will align itself to the Earth's magnetic poles when reasonably struck. In the same context a diamagnetic substance will align itself with its original pattern and exist in congruence with its mass free counter part when in dynamic equilibrium. Diamagnetism is that subtle force holding substance to its original pattern. These forces of diamagnetism and dielectricity have a sympathetic relationship in that they constantly influence each other, yet they are opposites in that one

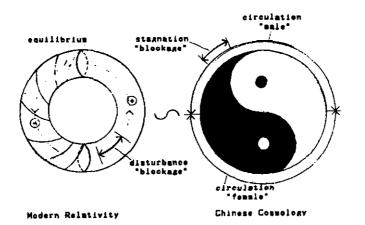


Fig. 1
Comparison between Modern Relativity and Chinese Cosmology models of health and ailment.

holds the integrity of the substance and the other of the original etheric pattern. Not only do these models comply with classical physics they also fill in the gaps.<sup>13</sup> The measurable manifestation of these waves in Homeopathic preparations is capacitance or dielectric constant as demonstrated by A. Gay and J. Boiron in the 1950's.<sup>14</sup> The values are virtual constants because of the properties of longitudinal magneto dielectric waves.

This is the most likely explanation for the Homeopathic effect: The medicines are an etheric imprint of the original pattern. The tiny, artificially shaped pillules and tablets under commercial production cannot serve as a direct channel to the original pattern by themselves. A living body conducts these subtle energy fields and serves as a channel. The union of functional ailment in the living system and functional imprint in the simillimum causes a "reflection" of the self-regulatory reactions within the system. This charges the Vital Energy, thus intensifying the symptoms and allowing the body to have a greater draw upon the etheric homeostasis field until a dynamic equilibrium has been reestablished. A greater tendency toward equilibrium or health means a lesser need for a "push" or dosage in case of disturbance.

Since health is like the rhythmic motion of a swing, one can see that an unnecessary or improperly timed "push" by the same remedy — or sizeable influence — will defeat the progression. <sup>15</sup> Therefore, it serves us to have a strong constitution which cannot be influenced so easily.

In terms of energy functions, the Homeopathic principles can be well understood. Hahnemann's conception of the Vital Force as the cohesive energy of the body correlates with the diamagnetic alignment of the living substance. The functions of the potentization are harmonic with the ailing system. If we take a moment to realize the manifold nature of harmonics, then we can understand how similar applications work.

## THE KUNG

Harmonics manifest themselves to each one of our senses on the physical plane. For example, Russian composer Alexander Scriabin among other composers theorized a relation between the notes of the octave and colors. The Rosicrucian Order assigned definite harmonic values such as A, tonic — 213Hz — red/orange. Charles Fourier, in *Theorie de L'Unite Universalle*, states a connection between colors, notes, and metals, such as A, tonic-orange-gold, metal. Chinese Cosmology exemplifies the relation between harmonic manifestations within a concise elemental symbology. For instance, water represents:

The North Direction The Color Black The Kidneys A Groaning Sound A Putrid Aroma A Salty Flavor etc...

The above manifestations can be treated like the modes of an octave for a piece of music, like the modalities of a proving. A person can modulate between these manifestations, physically or mentally, to achieve a particular state of being. In fact, this method

is used in conjunction with one of the highest forms of meditation developed within the Japanese Koga Ryu.<sup>17</sup>

In the deepest sense, all things emit or channel an energy function. The truer the function or simillimum is of a key substance the better it will resonate within a harmonic system. This is the underlying basis of potentization.

The application of the nosode would seem to be the best bet for matching a person's symptoms since this would most likely be a preparation of the patient's own blood or tissue. Unfortunately, there is not enough data in the texts which I have encountered, so I can come to nothing conclusive at this point.

There is an interesting facet of the blood from a similar study. When the blood is allowed to crystallize, it forms a resonant structure which exists in congruity with the etheric energy of the host. That is, the crystalline structure will change with the host's metabolism. The blood sample can also be used to effect changes in the host — regardless of the distance between patient and sample. 18

Needless to say, a blood sample conveys the original pattern of the host. The usual Homeopathic preparation taps into the same type of regulatory function, yet not nearly as homogeneously as a patient's own blood sample. Pfeiffer's work may be considered the most advanced deductive work on the nosode. I have read nothing of Hahnemann working with nosodes, but it seems that he would have preferred this especially in constitutional cases. Perhaps, the only two case histories he ever recorded simply did not include the study.

The Hahnemannian principle of the single remedy makes sense in the etheric realm. A functional interference can take place between the therapeutic action of two or more remedies which are enharmonic. Like two TV stations trying to broadcast on the same channel, a "jumbled" signal could occur which is not tuned into the subject's Vital Energy.

This is why processed and junk foods or illicit drugs are abstained during treatment along with food intake within a half hour of dosage. These items have their own estranged energy function. In fact, any food product may be host to a potentized form of herbicide, insecticide, preservative, and any other number of processing chemicals! Homeopaths have had to repair the results of this delinquent behaviour in the public fluoridation of our water supply and the mercury amalgam fillings of the American Dental Association for instance. (As of October, 1993 the FDA OK'd a steroid to increase the production of cow's milk. Is this just another fly in the soup? Will everyone want at least one?)

When suffering the effects from any of this an ailing person's own nosode would seem to be the single, most viable source of resonant energy — which is most Hahnemannian in principle and eliminates the need for a proving. What could be more ideal for Homeopathic treatment especially in chronic cases with a miasmatic chop suey? We shall see.

Presumably, today's over-the-counter, catch-all compounds have been through their provings, and are there for the average consumer to take for whatever acute disease ails them. Coupled with the depleted number of Homeopaths in the states this reflects a definite amount of complacency in the public towards having a personal physician in the form of a Homeopath, if at all. I can say that the nosode is the ideal treatment, but how many people are

willing to undergo this personal treatment?

It is not my intention to dispute the presence of Homeopathic compounds on our idiosyncratic market place. The most reputed formulations are by Dana Ullman, one of the authors of a reference text for this paper. If Mother Nature makes beautiful music with Dana's compounds, so be it. But should not he also educate the general public in exactly what Homeopathy can do for them?

Towards the Kung, Dana also advocates the model of opposite magnetic poles repelling each other as the action of treatment.<sup>20</sup> This model is perfectly relevant as long as we realize that we are in the living realm, therefore we are dealing with the energy of creation rather than decay as in conventional, academic physics. The energy postulated so far is a direct manifestation of the Vital Force.

As the reader might imagine the energy of creation is more complicated than that of decay. The Homeopathic remedy is potentized according to the form of the key substance. The potentization is, in essence, the diamagnetic alignment of the solvent to the original pattern. The original pattern is imbedded within the dielectric grid which is in dynamic equilibrium around the planet-like radio waves, but much more stable. Since potentizing a substance is equivalent to "tuning" the solvent to a specific function, this accounts for the specific activity down to the subatomic levels. (We must also remember the susceptibility to contamination of the remedies. The ones packaged in a dielectric insulator, namely glass, are probably the safest on the market. The contamination need only be a predominant etheric influence varying from a dust particle to a human hand, or even another remedy depending upon the potency.)

The key substances which are natural to the body — whatever the species — are better acclimated to resonate with the host. Some of the latest research in Homeopathy has been in the use of cell salts which are found in the cytoplasm. The preparations are nutritional in the sense of aiding proper cell metabolism. Thirteen have been discovered. The most recent one is the integral part of cell mitochondria.

Lithium, beryllium, gallium, and the Ca<sub>4</sub> isotope are the key components in the cell salt. Ca<sub>4</sub> catalyses the transmutation between lithium and calcium. Dubbed as the "Miracle Nutrient" or CoEnzyme Q<sub>40</sub> this salt was discovered by Dr. William G. Reiner from his work with a crystal of the same approximate composition having the same effect on the body: The alignment of the entire body with its original pattern. In essence, it potentizes the body and makes us more of what we were originally intended to be. This is done using the crystal as an etheric channel between the diamagnetic alignment and the congruent dielectric pattern. <sup>23</sup>

Etheric resonance is common to Homeopathy, Crystal Healing, and similar therapeutic media. This resonance occurs as specific energy functions. Since an organ within a species consists of the same material and functions, it will resonate with the same functions through another medium. Neuroscience research demonstrated the brain's ability to respond to certain electromagnetic signals which are quite subtle in nature. Experiments in Harmonics have already shown definite behavioral patterns connected with certain sweep functions within the 400-450 MegaHertz region (restricted frequencies between the VHF and UHF bands of television). Homeopathy has also been applied to psychological

ailments, therefore certain remedies also channel their corresponding Neurological functions.<sup>24</sup>

The modes of bioenergetic tuning have been at the crux of this article so far in order to provide the reader with a wide perspective on the function of Homeopathic remedies. My approach may not be of Homeopathic tradition, but the underlying principle remains. I advocate that the Holistic Practitioners of the future must be flexible in their techniques for healing a public with a wide range of needs, desires, and ailments. The New Knowledge which inspired Hahnemann must also be respected as it advances humanity into each new era. Homeopathy is one of those tools for ushering in a new era as an indicator of a reflection of self regulating, cosmic forces within the living body. Let me reiterate that I could not be more proud to begin my evaluations with proof denying those self destructive forces which are advocated by conventional science as the predominant guide in nature. As the cosmos intuitively provides for us, it is our duty to follow. Our practitioners must follow the most advanced methods available to secure the future of our health.

## THE BORDERLAND PROJECTS

In the early 1900's, Dr. Albert Abrams graduated from Heidelberg University where he earned top honors and a gold medal. He became convinced of the vibratory nature of disease as a result of systematic research into bodily reflexes and percussive resonances. Abrams held that histological tissue, as well as each kind of diseased tissue, had a definite vibratory rate. He theorized, and later verified that subtle radiation coming from the human tissues may be numerically detected and numerically classified. This detection process was known as E.R.A. or Electronic Reaction of Abrams. A distinguished Stanford University medical professor, Abrams devised a new system of diagnosis and therapy based on his original findings with the E.R.A. This was the first pure form of bioenergetic tuning since Homeopathy. Michael Weiner suggests the possibility of pure energetic tuning in his text (page 270) and Dana Ullman acknowledges E.R.A. as one of the unconventional methods for determining Homeopathic remedies. But their statements are latent in comparison to the events which followed.

There have been many variations of Dr. Abram's basic work developed in many countries. The basic principle of tuning subtle emanations from all substances, be they living or inert, has grown the world wide and there is now an international radionics movement ("Radionics" was taken from the 1920's knowledge of electromagnetism which did not recognize the Vital Energy, therefore this is a misnomer). Prestigious figures in European medicine turn increasingly to this field today. Even in the U.S. a major university finally entered this research. Stanford University in California, where Dr. Abrams once taught medicine, started a program in the 1970's under Dr. William Tiller. Early in 1975, the first U.S. Radionics Research Congress was held in Indianapolis, Indiana.

In the case of Abrams work, there was one individual who followed the original breakthrough and, in due course, found the cosmic mainstream. That individual was Dr. Ruth B. Drown. No other "radionic" researcher was able to make the cosmic connections that Ruth Drown established. Her cross sectional, full plate photographs of human histological and pathological structures are

unequalled. These photographs are staggering verification of the technology from which they are derived.

Dr. Drown remains unique in developing a method of photographing soft and hard tissue in cross section as an extension of her diagnostic invention. She was, in effect, the only researcher in the world to be able to objectively verify that her instruments tune into these tissues. She called this device "RadioVision", and it added to the basic tuning of the diagnostic instrument a simple method of flashing light on a photographic plate. This flashing was done in such a way that the light was modulated by the particular tissue emanations from the patient to whom the diagnostic instrument was tuned.

In nonmedical applications, any specimen may be tuned by the instrument. A proper analogy here is with radio broadcasting, but we should keep in mind that a Drown instrument deals with life energy—not conventional electricity.

All radio and TV receivers have an antenna with which they pick up vibrations transmitted through the ether by the various broadcasting stations. The antenna collects these vibrations, leads them into the radio set, and there they are tuned, resisted, amplified, and made audible by the process in the receiver.

The Drown instrument similarly begins with an antenna or aerial. The patient is the broadcasting source, emitting a jumble of different bioenergetic vibrations. This vibratory activity is conducted to the tuning section of the Drown instrument which is simply an antenna that can tune in bioenergetic vibratory activity.

The patient sits with his feet on the end of an antenna. The antenna collects his "broadcast", the totality of all the emanations from his body tissues and organs. From this totality, the various "transmissions" from heart, lungs, liver, and other individualized structures are separated by a tuning process. These

transmissions are then compared with what are known to be the normal transmissions from healthy organs and tissues.

The vibratory rate, or frequency, of any organ or other bodily structure is established by the molecular arrangement of material substance from which the organ is formed. This vibratory rate is expressed numerically. The rate of liver tissue, for example, is always the same throughout the human and animal kingdoms. This rate does not change unless disease or malfunction causes change in the molecular structure of the organ. (This natural property of living matter also allows universal Homeopathic treatment. The potentization's structure will match a specific set of modalities while the minute adjustments of a Drown instrument will tune in the affected tissues.)

All diseases similarly have their own distinctive vibratory rates which allows their identification. Years of cautious labor were

needed to establish these "rates" as they are called in Drown Therapy. These rates are assigned by nature or by that intelligent life force we know as God.

The rate of tissue in Drown Therapy is established by placing a healthy specimen on the foot plates, and then tuning in the molecular broadcast. The broadcast is broken down in the tuning process with Fourier's Theorem. This process is termed "establishing a rate." An example would be the tissue supporting the human kidneys which has a rate of 379. Healthy tissue of this type always has this rate and no other. (379 is a numerical key harmonic which concerns us more than its magnitude or the units involved. Another

key harmonic would be the basic geometric shape of the molecular structure.)

Drown diagnosis is entirely numerical in character and is more firmly anchored in mathematics than any conventional approach to diagnosis. The Drown system, by virtue of this mathematical basis, has an inherent affinity for truth — consistent with all other mathematical processes at human disposal. The device is a simple construction. (see figure 2).

The Tree of Life is the basis of all harmonics and is at the center of many secret religious and scientific societies. They have possessed this since antediluvian time, so it is said.<sup>25</sup>

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Qabalistic anatomy as utilised by Dr. Ruth B. Drown

Fig. 2
Schematic basis of the Drown Instrument

## THE EVOLVING PRACTICE

The Qabalah may exist beyond the scope of the average Holistic Practitioner, but Homeopathic Vibratory Radionics has a definite pertinence to Homeopathic practice.

An increase in potentization is equivalent to tuning into the exact symptoms produced, whereas the Drown instrument also matches the symptoms of the subject by tuning, but externally, and with numerical accuracy.

A researcher in any field would find specialized value in the Homo-Vibra Ray,

but Homeopathic physicians would have an edge with this device in their own practice as opposed to granular Homeopathic medicine. There are advantages of the Homo-Vibra Ray that make it superior to the conventional procedures, but the unmistakable similarities between them would permit one to incorporate the other with little difficulty. Homeopaths already work in conjunction with surgeons and similar physicians to make necessary structural corrections. The present inverse proportion of Homeopaths to specialists has also caused an influx of specialized practitioners. Throughout time, "radionics" must also be absorbed as one of the necessary tools in working with the Vital Energy. The Homo-Vibra Ray, with a purely numeric readout, has already been succeeded by a tuning device developed by Malcom Rae. He employs the superimposition of geometric polyhedra according to Haroldine in

Lithium and Lithium Crystals. The manifold nature of this application closely imitates the action of the potentization from an external source. No doubt remains that even more sophisticated systems will come to fruition over time. For now we should examine the upside of at least one device that could put the personal family physician back on line as the necessary trend of the future.

A question is before me which I should take a moment to answer first. The reader may be asking what right I have to suggest the combination of an unfairly maligned therapeutic system with another which has been under ridicule since its conception? I must agree that I am being more academic than practical in this paper when I say that a physician can go along his merry way with Homeopathy in one hand and "radionics" in the other and expect absolutely no trouble from the authorities. We must also remember

that the scorn is based here, in the states. The most visible enemy of Homeopathy is the AMA in league with the pharmaceutical industry for obvious reasons. Any form of "radionics" which claims manipulation of the Vital Energy has found an instant enemy in the FDA or some other "public health" agency.

If a therapeutic system has helped many people and is accepted in other parts of the world, why not explore it? I can understand fear of reprisal. These days anyone can be a criminal depending on the red tape crossing their path. These days official medicine slightly acknowledges the existence of a life force since the advent of the Russian's R & D in what they term the "bioplasm". Besides this, the formal education and practice of Oriental Medicine in the states has opened the avenues for alternative medicine - and I would not be writing this now if not for the New Knowledge and Holistic Practice being on the upswing in our society.

Meanwhile, the physician should stay as flexible as possible in order to service the widest range of people. The therapeutic systems in his/her repertoire should complement each other in order to focus on an individual with the widest range of efficacy. In case of Homeopaths, they can readily use a tool like Drown Therapy because of the similar modes of operation. Both acknowledge the need to treat individual symptomatology. Both require the full, personal understanding & medical history of the person under treatment. Both sources utilize only natural energy for treatment and tonify the system against further distortions of the bioenergetic flow — not accounting for an unHolistic lifestyle.

There are advantages that one has over the other which also provokes a complementary relationship. The Homeopathic remedies are highly accessible from low to medium strength. These preparations are mainly for miasmatic disturbance and are extremely inexpensive in contrast to commercial allopathic substances.

"Radionic" devices are not readily obtainable by the layman and are even less known. In spite of their eclectic use they can only be purchased through "underground" holistic science channels. Only the simple models are available for experimental purposes alone (see figure 3). The use of a Eeman BioCircuit, for example, requires the subject to be stationary. These BioCircuits are closely related to the Drown Instrument in that they reflect the energy of the user with no artificial power. Therefore, I will now refer to the Homo-Vibra Ray as a BioCircuit.<sup>26</sup>

Over the counter Homeopathy requires the layman to familiarize himself with the proper dosage and potency (save for aptly labelled packaging) and he must have prior education in what may negate or antidote the therapeutic effects. The casual user of any type of medication usually does not know or even care how a

remedy works — as long as it works. This is where public education is so important throughout the media or family doctors.

The reader may be wondering how these two therapies can work in conjunction with no professional advice. Ideally, a BioCircuit can be used when one is relaxing, and Homeopathy can be used for specific miasms or tonifying the body in specific situations. Since they both manipulate the same energy in tonifying their corresponding bodily functions, we can assume that these forces of the same guiding principle, working in tandem, one as therapy and the other as remedy, will serve as a complete prophylaxis against externally induced diseases.

As for the internal diseases, or the constitutional ailments, professional help finds its place, yet Homeopathy is not without difficulty. The complexity of a case is proportional to the amount of time needed to for repertoirization. Meanwhile, the ailing patient must wait, among others, for the correct treat-

ment, if not for any complicating miasms. Convergence of a conservative number of patients by Homeopaths and their being few and far apart signifies that professional treatment by pure means is not exactly encouraged among the peoples. The possibility of a special preparation in a specific case, and the necessity of educating the patient for proper treatment will also increase the time factor between remedy and cure beyond diagnosis and remedy. Recovery time also depends on personal constitution. Finally, Homeopathic treatment is predicated on the patient's accurate reporting of habits as well as pathology.<sup>28</sup>

A Homeopathic Physician specializing in biocircuitry would displace the above shortcomings with many more advantages. The Homo-Vibra Ray would objectively discern any weaknesses in the tissues even before a problem is felt and determine the chronic condition within a miasmatic condition much sooner, so a pathology is better determined. In spite of a complicated layer of

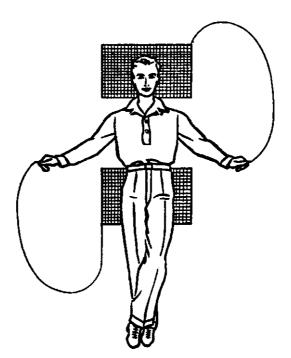


Fig. 3
Eeman BioCircuit

symptoms the biocircuit's scanning function permeates the entire body to discover the underlying cause. RadioVision cross-section photography not only eliminates the need for X-rays; it also takes pictures or videos of any definite cross-section for detailed examination of the tissue. This process completely outdates X-ray procedure and denotes responsibility only to the physician in his prognosis. A complete examination would take only three or four hours in contrast to a purely literary repertoirization and treatment for each set of symptoms which could take years depending on personal constitution.

A biocircuit concentrates on the particular constitution like Homeopathy, but perfectly reflects the body's Vital Energy Waveform as a pure energy Homeopathy. The patient need not be present for this therapy with the Homo-Vibra Ray. Only a crystallized drop of blood is needed even when taking the cross sectional photographs! Inaccurate reporting of habits would be replaced by accurate recording since a doctor can watch the area in question in real time or video tape regardless of distance. (This takes the idea of "Big Brother" to new heights!) Individual tuners for each patient would free the main biocircuit for the next patient, thus granting access to a greater number of people for the family practice. Of course, the more options a practitioner has to offer, the greater number of people he can serve. The therapies need only be compatible, so they can reinforce each other within a practice and the New Age Livelihood.

In Homeopathy, we have a formalized system of drug therapeutics, and a formalized system of pure energy therapeutics. Both treat patients according to the same guiding principles:

- 1. PROPHYLAXIS to generate resistance to infection.
- TREATMENT IN THE ACUTE ILLNESS to reduce length and severity of illness.
- 3. RESTORATION to revitalize patient during convalescence.
- 4. CORRECTION OF THE CHRONIC SEQUELÆ to restore the patient to his former state of health.

These are the elements of a long and fruitful Holistic practice. More sophisticated tools for health will develop over time which is why modern physicians should devote themselves to the New Knowledge as soon as possible. The younger generations will also discover alternative medicine as it is practiced regularly in other countries. We are influenced by the New Knowledge, so we must constantly update our methods towards a greater health and a better future for everyone. To this end we should employ the best technology for the greatest benefits.

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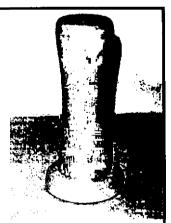
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## THE BORDERLAND EXPERIMENTER

## **EXPERIMENT: PLANTS AS SENSITIVE AGENTS**

by Charles Allon

MATERIALS:

2 Micronta Biosensors (Radio Shack)
Sharp scissor
2 or 3 potted plants
Ringstand with clamp
Electrode creme

recent discussion with Michael Theroux has triggered an incredible series of experiments designed to prove that vital currents do indeed flow through natural environments. Mr. Theroux has conducted a series of plant sensitivity experiments which have sufficiently stimulated my interest to produce a series of reports on the subject. These, I hope will best serve the qualitative sciences in establishing a new and more complete experimental method. I extend my deepest thanks to Borderlands journal, which I believe to be the most serious forum available in the scientific community today.

Do plants engage in dynamic conscious dialogue with the ground and other beings? Empirical discoveries made throughout the century by notables such as Bose, Hieronymus, De LaWarr, Backster, Lawrence, and others give adequate proof of this dialogue. We learn that plant tissues can be used and relied upon for establishing "objective" qualitative criteria. The remarkable sensitivity of plants to external conscious and auric influences is providing us all with a revolutionary new means of experimentation. This "objectivized" qualitative sensitivity becomes extremely important for those who wish the maintenance of pure qualitative approaches to experimental research.

The use of plant tissues as objective-subjective sensors becomes exceedingly important in dispelling the acrid dialogue between ourselves and quantitative analysts. Sensitive plant response allows the experimenter to recognize the continuity which exists between plant response and those of our innermost experience. We are thus provided with a means for objectivizing our deepest impressions and reactions to forces which lie in the auric domain.

## **PRELIMINARY**

Plants evidence a state, a condition of consciousness, in which they engage in active dialogue with the world. You will discover what Dr. Bose first recognized, the complete correlation of plant responses with the permeating emotional and mental fluctuations which flood our world.

The equipment which is required for this sort of experimentation is simple, and readily available. Michael Theroux mentioned that he had secured several Biosensors from a local Radio Shack. He successfully employed these to monitor plant responses. The Biosensors sold at Radio Shack were obtained for an incredibly low

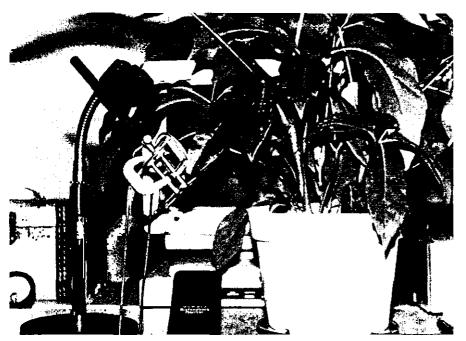
price, and proved to be excellent monitors for use in plant studies of this kind. I was later informed that none other than Dr. Buryl Payne is the designer and patent holder for this wonderful circuit. Mr. Theroux mentioned that his experiments began when, with these devices as a "poor man's polygraph", he rediscovered the amazing sensitivity of plants to distant influences.

With these Biosensors at your disposal, you too will find it possible to discover the reality of this phenomenon. The units convert galvanic skin response to an audio signal, generally registering tension responses as a sudden increase in pitch, and tranquility as a lowered pitch state. In this use, one measures the systolic-diastolic fluctuations of biological tissue.

Whenever such tissue is influenced by direct touch or from a distance there is an audio reaction which is immediately discerned. The process is effortless for the experimenter. Before any indications of plant tissue response are obtained, you must carefully observe several steps. The required adjustments are simple, and will insure the accuracy of your results. If you have been successful in securing a supply of Radio Shack biosensors, you should buy TWO or more. You will not likely find another means so affordable for conducting these kinds of experiments. Their applications in qualitative research are endless.

Take one of these units and carefully slice off the Velcro wrappings which surround each electrode disc. Carefully excise the excess cloth and expose the electrodes making sure you have not clipped the wire leads at all. It is important that you take care to not damage the shiny electrode surfaces, which are made of smooth stainless steel. You will not find a better means for monitoring the sensitive responses found active in minerals, plants, and humans. You may keep one Biosensor with its finger wraps to compare your own responses to external influences. Qualitative experiments require subjective controls. With one Biosensor connected to a substance as the variable, you may simultaneously observe your own responses with the other Biosensor as the control.

Obtain a laboratory-type ringstand and clamp. If you can, obtain a clamp with vinylized grips. If the clamp grips are not covered in vinyl, you may wish to wrap them in black tape in order to insulate them. Soft connection with the plant is critical. You do not want to damage the leaf tissues. You may wish to grease the leaf



Here is an example of the simple lab setup for listening to the responses of plants. The electrodes clamped to the plant's leaf are connected to the biosensor device, which produces a rising and falling tone corresponding to the plant's response.

surface where the electrodes are to be placed with some type of electrode creme. Bring your ringstand and mount the clamp at a convenient height. Choose a good sized leaf. There, where you wish to place the electrodes, smear the opposed surfaces of the leaf with a tiny drop of electrode creme. This coating must be transparent. Only a shiny coat should be visible.

Carefully place the steel electrode surfaces on opposite faces of the smeared leaf. Slowly and gently close the well insulated clamp on electrodes and leaf until firmly held. Do not "play" the wires too much. Make sure that you do not tear the leaf. If this has occurred, simply find another leaf and repeat the procedure.

## BASELINE

Once the electrodes are in place you are ready to rediscover the Bose-Backster effect. We will refer to the wired plant as the "monitor" throughout our discussion. The Biosensor feeds a mild electrical current to the leaf. Changes in conductivity are converted to a wavering audio pitch. Turn on the Biosensor and carefully adjust the gain. Listen. The pitch must not be excessively high. Lower the pitch to a reasonable wail. If the gain is too low, the pitch will studder like the sound produced by a Geiger Counter. Raise the pitch. Establish an "audio baseline" in the monitor by adjusting the Biosensor gain control until a steady signal is obtained.

One must be patient during this adjustment phase, since the plant goes into "shock" whenever any electrical gain is delivered. The plant is irritated by the current, and must become used to both the electrodes and the current applications. An ever mounting pitch reveals the commencement of plant "shock". After a few minutes, you will hear a subsequent rapid pitch decrease until the audio signal becomes a staccato. Raise the gain until a "constant pitch" is secured. Plant responses to radiant conscious energies appear as a great variety of audio pitch fluctuations.

When you have secured a gain position in which the plant audio signal is tremulous, a wavering quality which neither rises nor falls, it is then that you have reached the required "state of sensitivity". This state is dependent on time. Remember that, when experimenting with plant tissues, you are not dealing with a digital switch. Plants require time to respond. Also, unlike the reactions of switches and other electrical components, there is no indefinite sensitivity with bioorganisms. Plants suffer shock and fatigue. They offer us a time-dependent "window" of sensitivity, during which we may perform our qualitative experiments. Prolonged experimentation requires several prepared plants. Since plant tissues do suffer shock and fatigue, each separate experiment should employ a new prepared monitor plant.

When having obtained the "window of sensitivity", plant tissues will function as a conduit for bioenergies. Flowing in the spatial surroundings, these influences will modify plant homeostasis and trigger strong responses in your Biosensors. We insist on using the term "responses" and not "reactions". We do so for

a great number of reasons. The observation that plants continually "read" both the emotional and mental state of the experimenter contributes astounding new knowledge on conscious energies.

The fluctuating audio pitch in the monitor results from a fluctuating cytoplasmic electroconductivity, an activity difficult to explain by reducible forces. One monitors the very obvious fluctuations resulting from variations in light, heat, moisture, barometric pressure, breezes, and other such inert influences. These each reveal their influence in the lagging plant response to changes in the inert environment. I refer to both these forces and to the environment which they represent as "inert" because the plant is in no way reaching out to them. The plant is not connected to their energies in a vitalistic manner...as by anatomical extension so to speak.

## EXPERIMENT 1

Those forces termed electric, magnetic, sonic, thermic, photic, or barometric, do contribute their stimulating effects on plant tissue. But they do so as inert agencies. They do so as disconnected messages from the biological space in which the plants have their being. These inert influences very clearly register their influence in plant responses. One observes the effect of increased light on the plant by simply turning a bright lamp directly on the clamped leaf. Notice how the pitch begins to rise in increased activity. Apply water to the soil, wait and hear the rising pitch in the monitor. Blow a puff of air on the plant and notice the pitch rise.

Quantitative scientists would recite their long lists of force exchanges to explain each of these effects. They would tell how light, water, frictive, and compressive effects each stimulate increased cytoplasmic dilation and flow. The application of these inert forces would be, for them, satisfactorily explained in the enhanced electrical conductivity. This would then produce the

audio pitch rise. Their explanations for each of these experiments becomes increasingly strained with each variable which I will cite. Nevertheless, they will continue in producing their mechanistic "bucket brigades" even when it is apparent that have strained their own credulity to the point of failure.

### **EXPERIMENT 2**

The same force-chain explanations would be cited to destroy the wonder which one experiences when gently touching the probed leaf. Touch the leaf to which your probes are connected. The plant "coos and sighs" as do many domestic animals when stroked. We would be once again reprimanded by the "school of quantities" on this account, demanding us to relinquish our anthropomorphic identification with the test subject. They would explain that touch has altered the electroconductivity of the leaf, either by physically moving the electrodes or by increasing cytoplasmic flow through the addition of thermal energy.

Touch and stroke another leaf of the same plant, taking care not to disturb or move the probes in any way. Now, the "sighing" responses are heard again, and academic science halts for a moment to ponder the mystery. How to explain the response in the probed leaf when touching other more distant parts of the same plant? This infers the existence of a communicative system within the plant; a neural system through which responses are communicated and exchanged. Academes refute the very existence of neural systems in plants, despite the discoveries of Dr. Jagadis Chunder Bose.

Dr. Bose found that all plants have deeply imbedded neural strands within their vascular bundles. While vascular bundles serve as agents of fluidic transfer throughout the plant, the microscopic strands which Dr. Bose located demonstrate activity when adjacent plant parts are stimulated. Dr. Bose found that these strands exhibited negative electrical impulses when the plant was in any way disturbed or stimulated. He further found that such neural connections extended throughout the plant anatomy, effectively interlinking roots, stems, branches, leaves, and flowers. This great discovery explains responses which occur within the plant.

## **EXPERIMENT 3**

Now we will perform certain experimental variations which will force the academes to strain the reducible force explanations upon which they are so reliant. What shall they say of responses which occur through space without material connection? Bring a second potted plant into the room. Place it near the first "wired" plant. Notice any pitch changes? However carefully you approach the monitor plant, you will find that its audio pitch fluctuations become strong and excited. Leave the two plants together for a time and listen to the sounds. What you are hearing is a dialogue of mystifying content. These are communications of a most remarkable nature.

Allow the plants to remain in close proximity until the monitor reaches quiescence. Now very carefully remove the free plant to a six foot distance. Hear the "wailing" reaction in the Biosensor? Place the plants in proximity again. The wild and erratic wails cease after a short time. The plant grows excited by the presence of a second plant. The audio response becomes "frantic" when that presence is removed. The "wailing and quailing" of the monitor

plant evidences a response which can only be termed "emotional".

There are those who have taken other qualitative analysts to task on this citation. In the remarkable experience of this phenomenon one simply cannot cite the cause of this holistic response in sudden modifications of plant conductivity. The division between force responses and emotional responses is striking. It begins in simple experiment, with subsequent consideration of actual results. The response of plant tissues to inert forces displays far more complex attributes than can be attributed to ordinary changes in conductivity. They are asymmetric in tone and atempic in dynamics.

These audio indications reveal true biological responses, not inertial reactions. Moreover, they indicate defined degrees of response to external stimuli which can only exist in pre-patterned neurological systems. In both the sustained wailing or pacification alike, plants are revealing capacities of response. Such capacities are vast in their implications, normally associated with "higher" life forms such as animals. In more conventional circles they are referred to as behaviours. The degree to which plant species each participate with environmental changes may differ greatly.

We may hypothesize that plants collectively respond to a specified range which includes both sensual, emotive, and semi-conscious variations. And it is in this that we as qualitative scientists are most enthralled and intrigued. The behavioral response of plants to the environmental influences, caused by inert forces and other bioorganisms, is striking and most unexpected. The recognition of this phenomenon overturns the most fundamental tenets on which quantitative science is based, revealing anew the dimension of life discovered over a century ago by the great Dr. Jagadis Chunder Bose in India.

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## Resonant Frequency Therapy

Building the Rife Beam Ray Device by James E. Bare D.C.

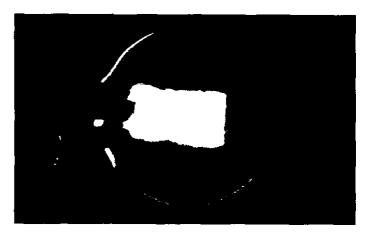
Review by Peter A. Lindemann

URING the last five years, I have been repeatedly approached by people asking me to work on the recreation of the Rife Beam Ray Device. I have always told them that the costs would be high, and that we would first need to build a very high power microscope, so we could see what we were doing. One optics specialist I know thought it might cost \$1M just to build the microscope. Because of these estimates, I have not seriously considered tackling the project. In the meantime, I know of at least three groups of people who have been trying to re-develop Rife's instrument. To my knowledge, none of them have succeeded. So, it was with great surprise that I learned that a Chiropractor in Albuquerque, New Mexico, near where I live, had succeeded, and written a book about how to duplicate this mythical device.

The book is only 76 pages long, in an 8½ x 11 spiral bound format. It is, however, an exhaustively complete set of instructions on how to buy 5, separate, "off-the-shelf" components, modify them, hook them together and create a modern version of the Rife Beam Ray Device. The full system can be built for \$900. The idea that all of the technical problems of the Rife technology had been solved by an unfunded, rogue researcher seemed unbelievable.

To find out, I arranged to meet the author with 3 of my close associates on Monday, March 18, 1996, at 6:30 PM., at his office in downtown Albuquerque. We stayed for 4 hours. What I saw "knocked my socks off". If you are interested in Rife's work and want to own a real Beam Ray device, drop what you are doing and buy this book!

Dr. Bare also has built a high resolution, dark-field microscope, with video attachments, capable of magnifications in the range of 30,000 diameters. With the high power microscope and the Beam Ray Device, he has been able to approximate Rife's original research environment. My friends and I watched on his high resolution TV, in real time, as Dr. Bare demonstrated the units ability to "blow" small organisms, when the Beam Ray device was tuned to the MOR (mortal oscillatory rate) of that organism. Two of us were not able to stay in the room with this particular frequency broadcasting, as it was too irritating and penetrating. During the course of the demonstration, however, he also tuned the unit to a number of beneficial frequencies (Rife's cancer cure rate) that felt extremely relaxing and soothing. There is no doubt in my mind that Dr. Bare has succeeded in creating a device that



is capable of doing what Rife's Beam Ray Device was claimed to be able to do. He may have done it in a slightly different way than Rife did, but the results are there.

The device I saw in Dr. Bare's office is the same device you can build by following the instructions in the book. It modulates audio frequencies on a high frequency radio carrier wave, amplifies this combination, balances the outputs, and radiates the resultants from a low-pressure gas plasma tube. The unit produces effects at a distance with a radius of over 50 feet. This is definitely the same modality that Royal R. Rife was using 60 years ago. Dr. Bare told me that he has successfully used Dr. Rife's MOR's on his device to produce the same effects. He also told me that he has been able to find an MOR for every organism he has looked at under his microscope. The implications are very important for the future of medicine.

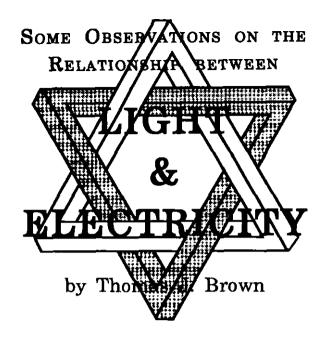
There is not much else to say other than the book is a clear, fully detailed, highly illustrated, manual on how to build a "Rife Beam Ray Device" that really works. The device you build from the book should be considered an experimental research unit, as it consists of a number of components, modified and wired together, and then operated in an unique manner. The device is not difficult to build, but only qualified electronic technicians should attempt its construction. The only piece that needs to be fabricated from scratch is the plasma tube. Dr. Bare built quite a few tubes during the experimental phase of his research, and the inexpensive "argon" tubes made for him at a neon sign shop work as well as his more expensive experiments. A tube that works very well should not cost the home builder more than \$50 to have made. The manner in which Dr. Bare has solved the various other technical problems of the device is extremely clever, and beyond the scope of this review.

The bottom line is this; the book is a complete and full disclosure of Dr. Bare's research as of February, 1996, and the device really works! Need I say more?

Dr. Bare also has a WorldWideWeb Homepage address at: http://www.rt66.com/ rifetech/#RTS

Please do NOT hassle him with minor questions or other E-mail until after you have read the book and have decided to build

Cost: \$25.00 plus shipping and handling, available from Borderlands (see ad on page 19).



Friends, avoid the darkened chamber,
Where one pinches off the light,
Which must bow in lamentation
While distortions mock our sight.
Over-credulous believers
Through the years there've been enough;
In the noggins of your teachers
Reign illusions, specter-stuff.

-Goethe

HEN we open our eyes and view our surroundings this is possible because of a phenomenon we term "light." What is the origin and cause of this "light" so necessary for optical perception of the objective world? Battles have raged over this question. It has been claimed to have been answered many times over the centuries, but has it truly been answered? Is light a particle, a wave, a Janus-headed aberration mixing the two and confusing the mind, or is the expression of a cosmic force which the gravity-bound viewpoint of modern science is unable to understand in its entirety due to definable yet immeasurable aspects? At the root of all this is the question of the formation of colors. Modern science claims that color is a mere rate of vibration impinging upon our eye, that it is but an illusion... But there are flaws in this view, serious flaws which anyone of average intelligence can see for themselves if they but look.

Modern conceptions of color formation generally derive from the basic experiment of Sir Isaac Newton where he closed himself into a dark room and allowed in only the tiniest slit of light. This slit of light was directed to pass through a prism and onto a white surface. The result was the spectrum of red, orange, yellow, green, blue, indigo, and violet. Newton hastily concluded from this single experiment that the colors of this spectrum are "hidden" or "contained" in light and can be extracted with the prism. Newton declared that as a result of his experiments he discovered that "white" light contains all colors and black is the absence of all colors. Certain pigment mixing experiments may mislead one to consider this viewpoint, but a full analysis of prismatic experiments will quash this error in thinking.

The linear mode of thought arising along with the Newtonian concept of the spectrum has given rise to modern conceptions of the



Left: Sir Isaac Newton. His errors in thinking have led centuries astray. Right: Johann Wolfgang von Goethe, Poet and Scientist. His enlightened scientific concepts are still misunderstood and ignored. A tremendous battle raged centuries ago over who was correct in their theory of color. Newton won and his error-riddled theory became popular. Goethe was frustrated that he was the only one in his day who fully understood the nature of color.

"electromagnetic spectrum". This grand spectrum is one in which all energies, be they light, sound, diverse electrical waves, etc., are claimed to line up like well-trained soldiers marching in perfect order, from zero to infinity, in hierarchy of what is alleged to be their true nature—their vibratory rate. While there can be no doubt that the electromagnetic spectrum has a specific, engineerable reality, whose conception has provided us the many volition-saving products of technology, we should not jump to the conclusion that it is an all-encompassing reality until we take all experimental considerations into account.

## UNIVERSAL APPROACH

While Newton followed the analytical, scientific methods in his path of discovery, the great poet Goethe took a more universal approach. Rather than simply studying light and color by shutting himself into a dark room and reproducing the experiments of Newton, which of course he did very methodically to assess the results first-hand, he chose to discern the nature of color in its full glory and expression in the manifest world.

Goethe accepted that Newton's experiment showed scientific truths, but he was not so rash as to leap to the same hasty conclusions. He could clearly see that Newton was in error in his deduction of the red-orange-yellow-blue-indigo-violet (ROYGBIV) spectrum as a primary attribute of light alone. Goethe clearly saw that the ROYGBIV spectrum was a manufactured product of a specific arrangement of slit and prism, a secondary effect of the process of color formation.

In Newton's theory of gravity the most important question goes unasked: that of how the falling apple got up in the tree in the first place, what made it grow through various formative stages into its fruiting stage—all the time growing in the opposite direction to the force of gravity? In this same manner the larger part of color formation theory—that gleaned from observing and understanding the essence of light and color in Nature—was lost from this gravity-bound viewpoint.

Now, let us consider that glamorous, classic experiment of Sir

Isaac Newton. He is isolated from the natural field of light in his darkened room, with his apparatus allowing in only a small beam of light which is directed through a tiny aperture which then permits a smaller slit of light through, then on through a prism onto a white surface. The concept of the "ROYGBIV spectrum as the absolute structure of the components of white light" comes from this setup (just think of it ... studying light in the dark!). Now let us take over the experiment and widen this slit: green disappears, with the white of the projection surface taking its place. We see two bands of colors, red-yellow and blue-violet, facing each other as polarities across a white middle. Bring the slit together again and green again reappears when yellow and blue intermingle. Forgetting for the moment all sorts of theories, examination of the observable phenomena shows that color formation consists of border effects between light and dark areas. The red is over the shadow, or black portion of the projection and the yellow is in the illuminated, or white portion. Blue appears on the white and violet on the black. The results of this experiment can be more easily observed by looking through a prism at diagrams which illustrate the borders in various arrangements.

Now, let us continue our experiment by reversing the borders across which our experimental light is travelling. Rather than running the light through a slit, let us run it around an object whose width can be easily manipulated. If we are looking through the prism at a card let us look at several dark lines of varying width on a white background. What we now see is another spectrum: yellow, red, magenta, violet, and blue (YRMVB). If we widen the object or line magenta disappears and we have darkness separating our two polarities, yellow-red and violet-blue, red and violet over the dark side of the slit, and yellow and blue over the illuminated side. (View Chart 1 through a prism to see the various color phenomena.)

If all the colors of the Newtonian spectrum are contained in light, then shouldn't all the colors of this second, or Goethean spectrum be contained in darkness? The actions of infrared and ultraviolet rays which are below and above the Newtonian spectrum are well known and studied, but what appears above and below the Goethean spectrum? Research carried on by Professor August Kirschmann has shown that "a broad zone distinguished by the absence of ultra-violet rays extends into the colorless light adjacent to the yellow. Adjoining the blue there would probably also turn out to be a zone with the absence of infra-red rays. To the theories of present day physics this is a mystery, since according to these theories ultra-violet as well as infra-red rays must be present in the colorless zones, just as in any white light."

We must also question the wavelength theory of light. It no doubt has an engineerable reality attached to it, but how does magenta fit in? It doesn't, even though green and magenta can be clearly discerned as being formed from the two color poles. All prismatic colors are not allowed into the "electromagnetic" spectrum, and thus magenta must have no wavelength. It is considered to be a secondary mixture, unlike it's polar opposite, green. How is the wavelength deduced? By use of diffraction gratings and similar objects which manufacture colors along borders. Thus it may be considered that the wavelengths have a certain reality, but that it is a secondary activity related to the interaction of the materials used in its production, and thus may not be a primary attribute.

Thinking along these lines gives rise to grave concerns with the present conception of the linear electromagnetic spectrum. This is not to say that the experiments giving rise to this conception are incorrect, rather, their interpretation has produced a comprehension of

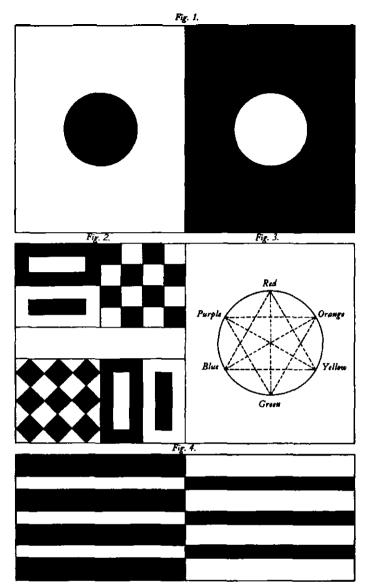


Chart 1: Some of the cards used by Goethe in his prismatic experiments. Observation of these figures through a prism will show that color is manufactured at the borders between the white and black portions. Move the cards around and watch the colors cling to the border regions. There is nothing like experience to allow one to see the fundamental truth of this situation. Goethe's color circle is shown at Fig. 3 in this series. His opinion on his color theory was recorded later in his life:

"As for what I have done as a poet, I take no pride in it whatever. Excellent poets have lived at the same time as myself; poets more excellent have lived before me, and others will come after me. But that in my century I am the only person who knows the truth in the difficult science of colors—of that, I say, I am not a little proud, and here I have a consciousness of a superiority to many."

only part of our functioning reality, and with the attitude that this is the whole story on the energies of the universe.

Goethe combined the two projectable spectrums together to create a color circle (Chart 1, Fig. 3) which takes in the true structure of prismatic colors. Let us start travelling his circle at red, then follow around to orange, yellow, green, blue, purple and then back to red. To fully understand this diagram we must define the colors as Goethe

used them in this circle: "red" is what we shall term magenta, it is the central prismatic color in the dark slit experiment, Goethe also termed it pur-pur, peach-blossom, or pure-red; "orange is what is red"; yellow, green and blue are as they are, and "purple" is violet. Goethe had clear reasons for these designations. It is outside the scope of this present article to explore them or the full range of experiments available along these lines. We shall suffice here to organize the basic structure of color phenomena.

There are many color circles presented by proponents of various theories of light and color, and these cover a wide range from various interpretations of Newton's spectrum through to industrial pigment grading charts. Goethe's color circle is based on actual prismatic phenomena. This color circle is expressed around the six pointed star, the ancient designate of the maxim "as above, so below".

Goethe felt that green was actually the lowest among the "living" colors (white, black and grey being "dead"). As a mixture of what he considered the via the mixture of yellow and blue.

On the other hand he called magenta "pure red" and considered it the ascent of color towards its highest point, "The path to culmination in pure red appears more dynamic; the appearance of green has more of an atomistic nature." It is clear that Goethe considered green and magenta to be polar opposites.

For reasons now becoming clear the light slit (ROYGBIV) spectrum will be forthwith designated as the "physical" spectrum, and the dark slit (YRMVB) spectrum as the "etheric". It will be discerned that this true structure of color has a direct and profound relationship with the structure and function of the human body.

## LET THERE BE LIGHT...

An interesting and important researcher in color theory was Dinshah Pestanji Ghadiali. Known as "Dinshah", in the 1920s he introduced his color healing system known as Spectro-Chrome. While Dinshah was an ardent disciple and tireless defender of Newton and his theory of color, it is apparent from the study of Dinshah's conception of the structure of color that his system is quite useful for understanding the Goethean color circle. In fact, the prismatic colors around the six-sided star as presented by Goethe are the fundamental structure of the Dinshah Spectro-Chrome system as seen in Chart 2. Dinshah's research was based heavily on the works of Newton and Edwin Babbitt. Curiously, Goethe's color theory never gets even the slightest mention in a shelf full of books and magazines written by Dinshah.

> Dinshah's yogic sensitivity combined with his scientific research provided him with indications that this color structure is directly related to the function and structure of the human body. Red he saw as being directly relating to the function of the liver and the red blood cells. Violet relates to the spleen. The "white" blood cells, Dinshah claimed, are really "violet" in nature. To green Dinshah gave the role of governing the head and its functions. This triangle of liver, spleen and head relates directly to the red, violet, green triangle. Green is also the dominant physical color and is used to stabilize physical functions of the body. To the Yellow-Blue-Magenta triangle Dinshah related the functions and flows of the body. Yellow acts as a motor stimulant for muscles. Blue, a motor depressant. Magenta rules the energetic flows and was used for balancing the sexual energies and the heart,

We can see in this structure a direct correlation to Goethe's idea of green being "atomistic" and magenta being the higher, upward striving side of the color circle. Dinshah stated his belief that green and magenta were "the same color", but that they rotated in opposite directions during their oscillations in the ether. In effect he agreed with the wavelength theory, but felt that magenta had the same wavelength as green.

To get the 12 colors used in Dinshah's Spectro-Chrome therapeutic system five glass slides were used: Red, Yellow, Green, Blue and Violet, all "tuned" for each individual color treatment machine to produce the proper full color circle. They were thus called "attuned color waves" and they were mixed as follows. Red + Yellow = Orange; Yellow + Green = Lemon; Green + Blue = Turquoise; Blue + Violet = Indigo; Red + Blue = Scarlet; Red + Violet = Magenta; Violet + Yellow = Purple. What Dinshah considered to be the etheric colors are italicized.

The operation of the Spectro-Chrome system was simple, but precise and profound. Specific colored lights were projected upon a person, either on the whole of the body or on specific parts. Long standing, or sluggish conditions, such as tumors, were seen to be on the ultra-green, that is from green to violet. Infra-green colors, those from red to green, were used to "normalize" these conditions. For recent, sudden, or red conditions, such as burns, bruises, etc., one would normalize using the ultra-green colors. For conditions relating to the circulatory and sexual functions of the body one would use the



As Above - So Below

two true colors, yellow and blue, it was The "Great Seal of Solomon", symbolizing the Uniclosest to the grey, created by mixing versal structure. Exceptional archetype for black and white. He said, "Green re- understanding light and color as well as their relaminds us of a molecular mixture", and tionship with electrical propagation. Note its direct he saw green as the dissolving of light correlation to Dinshah's color wheel in chart 2.

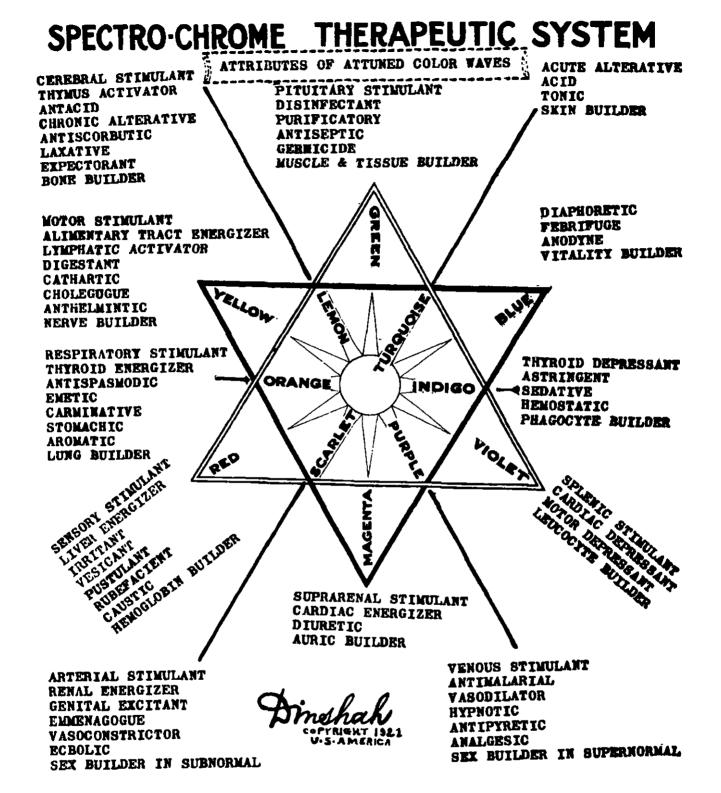


Chart 2: Dinshah's Spectro-Chrome Therapeutic System. To get the 12 colors of the system five glass slides were used, Red, Yellow, Green, Blue and Violet, all "tuned" for each color treatment machine to produce the proper full color circle. Red + Yellow = Orange; Yellow + Green = Lemon; Green + Blue = Turquoise; Blue + Violet = Indigo; Red + Blue = Scarlet; Red + Violet = Magenta; Violet + Yellow = Purple (Etheric Colors are italicized). For presenting this profound system to the world. Dinshah was subjected to a variety of trials, had his laboratory burned to the ground. and was put under court order never to use the word "Spectro-Chrome" again.

etheric colors between red and violet: scarlet, magenta and violet.

Color, consciously or unconsciously, is a profound alterant on our human physical, mental and spiritual states, the fundamental functions of those curious beings who stand fully upright between the lightness of heaven and the darkness of earth, and are structured and sustained by that interaction.

## SKYWARD

Should your glance on mornings lovely
Lift to drink the heaven's blue,
Or when sun, veiled by sirocco,
Royal red sinks out of view—
Give to Nature praise and honor,
Blithe of heart and sound of eye,
Knowing for the world of color
Where its broad foundations lie.

-Goethe

Let us observe the sky. During a cloudless day we see two distinct atmospheric colors, yellow and blue, which we now know Goethe considered as the only true colors. The yellow is the dot of the sun and the blue is the dome of the atmosphere. The red-yellow pole of color formation is observed as the sun moves from overhead towards the horizon, it progressively darkens through orange-gold-red colors of diverse variance, until it disappears beneath the horizon. As the sun sinks the blue sky turns darker towards the black sky of night, lit only by the stars. Mountain climbers and jet pilots have reported seeing the sky turn to violet at high altitudes. We can see that this is the blue-violet pole.

In terms of propagation the yellow light of the sun can be seen as a radial transmission wave, or rays, directly connecting the atmosphere with the solar body itself. This red-yellow pole is a longitudinal, instant direct connection. At night the longitudinal beam of stars can be seen. It is possible, given this line of thought, to conceive of the probability that the starlight we see is an instant transmission, a direct "real-time" connection to the star we are viewing.

The domed blue sky can be attributed to the luminescence of the atmosphere by the solar wind—that energetic stream which the sun continually feeds into space. The solar wind takes approximately eight minutes to travel to Earth from the Sun, though some atomic particles carried by it may take longer. It cannot travel the distance to other star systems and this is why we see only the longitudinal rays of stars at night. We could see them during the day if it were not for the blue sky. Actually, a transverse light filter may be manufactured by digging a deep well and climbing down to the bottom. One may use this device to view stars during the day. Viewing distant objects through a tube produces a similar, but less profound effect, the objects appear more clearly.

As the solar energy cannot be separated from the life force, we look to Wilhelm Reich's observations of atmospheric orgone for help in understanding the structure of this blue atmosphere. Reich discovered, learned to isolate and scientifically study the life energy which he termed "orgone". Its observable form is that of a pulsing vesicle which has specific properties. Reich reported that among the observed optical properties, the orgone was bluish and that it moves through the atmosphere in a "corkscrew" pattern. We can see this as a progressive, life-positive, transverse wave. Once one begins to "read" the clouds, they will notice this corkscrew pattern as a regular function of cloud formation. Its signature manifests in diverse metamorphosis, but once recognized, it will be readily noticed.

### FROM THE ETHERS

The glow retreats, done is the day of toil; it yonder hastes, new fields of life exploring; Ah, that no wing can lift me from the soil, upon its track to follow, follow soaring...

-Goethe

These words running through the young Nikola Tesla's mind released from within his imagination the discovery of the rotating electric field, the result of which is the polyphase AC current in use worldwide today. Through this single instance one can see that Goethe's works have transformed our world. However, the potential within them for far greater things will be appreciated by those with the eyes to see. Carrying with him the profound poetic vision of the 19th century natural scientists, Tesla went on to far greater inventions, inventions whose understanding is not possible with modern conceptions of the physical nature of the universe. He speaks of wireless power extracted from the luminiferous ether and delivered freely to anywhere on earth; of transmitting and recording thought through electrical analogs of the optic structure. There is good reason to believe that Tesla had working models of these fantastic devices.

Rudolf Steiner, editor of Goethe's scientific archives at Weimar following his university years, was a prolific writer and lecturer. Among his thousands of lectures, ranging from simple means whereby one may attain stages of higher consciousness on through medicine, anthropology, philosophy, history, he gave three full scientific courses, Warmth, Light and Astronomy. Steiner was no stranger to Goethe's color theories or to the science of electricity.

Steiner attributed all energetic activities to the "sensible", the "supersensible", and the "subsensible" realms. The sensible is what we directly perceive with our physical senses. The supersensible is that which is above the normal range of our senses. In order to "see" into that realm one's senses must be in an aware and open state, which allows a higher consciousness to function. That which is below our senses, the "subsensible", is beneath matter and is studied through the dissection and dissolution of material substance. This is most especially the case of the products of material dissolution, the protons, neutrons, electrons and related cloud chamber patterns claimed to be particles. We need meters and machines to "sense" this realm.

While light has the eye to perceive it, no organ has developed in the human body for the perception of electricity and thus it is subsensible. Electricity and electrons are very real, our electronic technologies depend on their reality for operation. However, we must understand their true place in the structure of the universe if we wish to progress in our knowledge.

According to Steiner the supersensible realm contains four ethers, Life, Tone, Light and Warmth, which are reflected in the four sensible states of matter, solid, liquid, gaseous and plasmic. Steiner stated his impression that electricity is the fallen Light Ether. It is an interesting thought, for which I have not as yet found any correlation in his scientific works. However, our knowledge is always progressing with further research and we shall see a relationship emerge from acknowledging certain polarities discovered in electrical waves.

In order to progress in our understanding of the relationship between light and electricity we must interject some basic concepts on projective geometry. Projective geometry was considered by Steiner to be the truly universal geometry, of which the Cartesian system is but a subset. Relegated to pure inertial matter, the Cartesian x,y,z coordinate system fails in interpretation of the geometry of living systems.

In projective geometry the point and the plane are the same object at different perspectives. This is quite easy to perceive with the use of the imagination: envisage a minute point, plastic in nature; this point begins to expand until we see it as a ball; we can put our arms around this ball as it continues to expand like a balloon being filled with air; as our the ball expands our arms move wider and wider apart, until when the ball is expanded to infinity our arms are stretching straight out at our sides. We are here against a plane, and can see that the plane is a sphere expanded to infinity. If we take our plane at infinity and progressively reduce it, it becomes again a sphere and finally a point. Further study will indicate that the polarity of point and plane are mediated by the line, or ray.

Back to our model, where we may continue reducing on past the observable point to a sphere expanding towards the infinite plane on the interior of the point. This reverse situation is in the realm of counterspace. Steiner considered the etheric energies to be operating in this inner space. Modern science, of course, tries to penetrate the inner realm of matter, but does so in a crude and destructive manner, destroying what it looks into, and mistaking the particles of decay for the "building blocks".

## ELECTRICITY

Electricity has always been recognized as operating with inherent polarities. We know of positive and negative electricity, obtained through friction against glass and resin and related substances. The polarity of the colors of the electric fields surrounding the anodes and cathodes in vacuum tubes are well known, they are respectively reddish, with radial forms, and bluish, with planar (sphere at infinity) forms. These colors and shapes are directly related to atmospheric color, but in relationship to electrical power usage we must turn to certain modern researches to observe the full range of polarities inherent in transmitted electrical waves.

The researches of Eric Dollard have provided us with an understanding of the basic nature of electrical propagation. Dollard has demonstrated, through experimentation with discharges from inductors and capacitors, that the realm of electricity contains many polar phenomena.

In experiments at Borderland Labs, circa 1988, the polarities of magnetism and dielectricity, and their geometric relationships in transverse and longitudinal waves, were clearly demonstrated (see references 7,8,9). Dollard demonstrated the inverse relationship between the coil, or magnetic inductor, and the condenser, or dielectric inductor, and their usage in propagation of the electrical polarities.



The coil, or magnetic inductor, whose symbol is pictured above, is used for the storage and return of magnetic energy in electrical circuits. This energy is stored in space, being the magnetic field around the inductor. The coil is spatially open, and this space is used for the storage and return of the magnetic energy. The discharge from a magnetic coil, being electromagnetic in nature, is taken as the magnetic pole in our developing picture. This pole propagates as red/yellow discharges, suggesting a relationship with natural color formation.

When the magnetic pole predominates, as in electromagnetism, the propagation has been shown to be a retarded transverse wave, slower than the speed of light. Eric's engineering mathematics, solidly based on the work of Tesla, Steinmetz and Heaviside, describes the transverse electromagnetic wave (TEM) to be like a sail against the wind, which allows us to easily picture its retarded propagation characteristics.

As all electricity is considered to be electromagnetic in nature, it is easy to see why people have trouble understanding the reality behind Tesla's work. Electromagnetism is only one side of electrical phenomena, just as Newton's spectrum is only one side of color phenomena. But let us move on to learn of the "other side" of electricity, which has really been right in front of us all along.

The condenser, capacitor, or dielectric inductor, (symbol above)



is used for the storage and return of dielectric energy in electrical circuits. Dielectric energy commonly manifests as "static" electricity, though it is anything but static. The condenser is spatially closed and the dielectric energy is stored in *counterspace*, that is within the component, which consists of insulating materials that are generally considered as not allowing electricity to pass. The dielectric manifestation of electricity is taken as the electric pole, which propagates as blue/violet sparks when discharged from a condenser.

Orgone accumulators are a type of capacitor and the blue optical properties of orgone may be seen when using one. This indicates a strong relationship between dielectricity and orgone.

The electrical pole is dominant in the transmission of Longitudinal Magneto-Dielectric (LMD) Waves which have been measured at speeds well above the speed of light. This is the form of electricity Tesla was propagating from his Magnifying Transmitter. The LMD wave is totally misunderstood in modern electrical theory, and is functionally a direct connection between transmitter and receiver, which renders them as one unit.

This LMD propagation can be best understood from the perspective of projective geometry. Let us take the earth as an electrical plane at infinity, which it is as far as electrical and geological engineering generally consider it. What Tesla did with his Magnifying Transmitter was to change the electrical perspective from the plane to the point! Thus during the operation of the Tesla Magnifying Transmitter the earth became a single point electrode which could be tapped at any point as though it were the output terminal of the transmitter.

In projective geometry the line mediates between point and plane and in our example the LMD wave appears to manifest as a direct line between transmitter and receiver. Let us picture this line as a solid rod. If one pushes the rod longitudinally, the opposing end reacts instantly, there is no time lag. On the other hand, the TEM wave can be pictured using a piece of rope that is given a sharp shake, the wave can then be seen travelling down the length, loosing energy as it goes, taking its time to reach the end.

When the magnetic and dielectric inductors, now pictured as polar in function, are combined in parallel, upon electrical stimulation there is created an oscillating circuit (OC). Depending upon the specific engineering of the OC it can produce predominantly TEM or LMD waves. Oscillating circuitry allows us communication via radio waves of diverse sorts.

There is an interesting analogy of oscillating circuits to the human structure: The inductor is like our coiled intestines representing the metabolic pole of the body and the capacitor relates to the plates of the skull, connected with the nerve polarity in the body. In the body

### Chart 3: Relationships Between Light and Electricity **TEM Waves** Green Electricity in present use Physical-Spatial Retarded Transverse Within sensory range Slower than light Dielectric Yellow-Red Blue-Violet Magnetic Capacitor/ Solar Body Sky Dome Coil/Spatial **ELECTRIC** LIGHT **Counterspatial** Longitudinal/Radial Transverse/Planar Yellow-Red Blue-Violet Instantaneous Speed of light [in vacuo: Radial] [in vacuo: Planar] transmission Magenta LMD Waves Tesla's Electricity Etheric-Counterspatial Beyond sensory range Longitudinal Faster than light

the nerve and metabolic poles interact to allow the rhythmic system to function, allowing us to communicate using our breath.

## **ANALOG COMPUTERS**

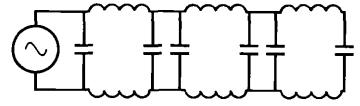
To fully understand the polarities inherent in electrical propagation we turn to the use of analog computers in the study of electrical propagation. These computers are demonstrated, with measuring equipment, in reference 8.

Shown above is a schematic of an assembly of two capacitors and



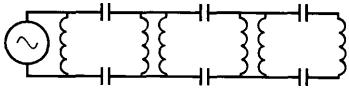
two inductors forming an element of an analog computer used to study the characteristics of TEM and LMD waves. The transverse and longitudinal components move at 90° to each other, that is the transverse along the transmission line, and the longitudinal at 90° to it. This can be understood more clearly from the following diagrams:

Above is an analog computer of a classic transmission line for use in determining the characteristics of TEM waves. The power source is at left. Magnetic distribution, as measured by a pickup coil, is high-



est at left and lowest at right. Dielectric distribution, as measured by a unique multipactor-photomultiplier detector, is lowest at left and highest at right. The magnetic and dielectric components are in space opposition. Finger testing shows that the coils are hot on the left where magnetism is highest and cool on the right where it is lowest, and the capacitors are cool on the left where dielectricity is lowest and warm

on the right where it is highest. This type of circuit produces weak oscillations and has slower than light propagation characteristics. The TEM wave can be seen as an unnatural form of electrical propaga-



tion. We can relate this to the concept of Newton's apple falling.

Above we now have an analog computer of the longitudinal magneto-dielectric component of an electric wave which travels at 90° to the TEM component. This configuration is used for determining the character of LMD waves. Source, again, is at left. Magnetic distribution measures low at the left and rises towards the right. Dielectric distribution measures low at the left and high at the right. The components are in space conjunction, in contradiction to the Law of Electromagnetic Induction which says these components must be in quadrature relationship in space and time! Finger testing shows coils cool on the left rising to hot on the right in direct relation to the quantity of magnetism distributed through the circuit, and capacitors are cool on the left and hot on the right, again in direct relationship to the distribution of dielectricity in the circuit. This circuit produces strong, sharp oscillations (high "Q"). This is the natural form of electricity, as Tesla well knew, and propagates faster than light. We can relate this to the growth of the tree which produced Newton's apple.

To Steiner a tree's growth-producing etheric energies would exist in counterspace. To Dollard the LMD wave propagates in counterspace. In living systems such as plants, this counterspatial energy can be understood to partake of the shaping of the plants. Interestingly enough, Dollard's Tesla apparatus was capable of emitting discharges (or possibly implosive charges as the equipment indicated current flowing to ground during discharge) which looked uncannily like plants. Changing the pulse rate and bandwidth Dollard could produce discharges that varied from scrawny desert bushes to lush foliage. This is the living, ignored side of electricity so absent from our modern textbooks, just as the etheric spectrum is absent. A magnetic or di-

electric discharge at the same frequency each has its own peculiar characteristics. Which is to be placed in the linear electromagnetic spectrum? Or are we ready to rethink our basic concepts?

We can see from these observations that electricity and light are directly related as inverse functions of color formation and wave propagation phenomena. We thus build a picture in our imagination of electricity being the fallen Light Ether. One piece that doesn't fit exactly is the mentioned previously vacuum tube anode/cathode color scheme which has the same color/propagation characteristics as atmospheric color-there is no reversal in that instance. This may be due to the nature of electricity operating within the vacuum tube, and this possibility is being considered. In a vacuum tube driven Tesla Magnifying Transmitter we would get LMD waves propagating from it, but internal to some tubes we could get opposing color/ propagation effects, so a logic develops as we look into this question.

Chart 3 summarizes and attempts to map the salient

polarities of the generalized color/propagation characteristics of atmospheric light and electrical waves & discharges into geometric form for further study. The *in vacuo* cathode/anode propagation forms are in brackets to separate them from the general picture until we understand that situation better. Much further research and thought needs to be directed into this area, and these color/electricity relationships should be taken as a preliminary excursion into an exciting new area of research. This information is presented as a guidepost and cornerstone for others to build upon, and may very well be updated through alteration or refinement as research continues.

The crude and improper concepts of electricity and color formation which the modern world view has shackled our civilization with must be overcome. In order to progress to higher, more refined levels in the generation of power to sustain our civilization's endeavors it is fundamental that all energies are properly understood and defined. The only way to do this is to observe the totality of phenomena with our full range of human capabilities, and work upwards from there. This will elevate the characteristics of our endeavors towards those which are most life-positive and fruitful.



Above left is a discharge from a Tesla Magnifying Transmitter built by Eric Dollard. While a "discharge" was observed, five radio frequency amperes were measured flowing to ground, thus implying that what was being viewed was an "implosive" effect—the result of energy condensing from space. The TMT is used for broadcasting Longitudinal Magneto-Dielectric Waves. Above right is an organic form burned into particle board by the same equipment. Note its similarity to both a tree and a river system. A tree grows upwards while a river flows downwards, both branching at the most convenient point in space to allow the natural flow of energy.

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DIRECTIONAL ANOMALIES

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RACE Hanover was sitting in the pilot's lounge, sipping a cup of coffee. She was pretty nervous about her upcoming tests, and sought the advice of a senior pilot who had given her encouragement before. She was especially concerned about navigation, especially the part of the test where she was going to have to fly with blinders on. The old man smiled, drew a deep breath, and said, "Looks like it's time to tell you about a pilot's secret navigation tool". "What's that?", Trace asked. He smiled more, leaned over, and whispered, "When all else fails, follow your nose."

The young woman looked very confused. With a chuckle, the old pilot continued, "It's true. Here's how it works. In the tip of everyone's nose, there's a little extra iron. Some people have more than others. The best pilots, the ones who survive, you'll notice they pretty much always know where North is. With practice, they've learned how to use the changes in how their nose feels, as a navigational aid. Try it – it works."

Science hasn't yet verified the old pilot's words, but there certainly is great variation in the sense of direction available to people. Some people really do know pretty much where north is all the time, with a commensurate ability to find their way around even after only an hour in a strange city, while others get completely lost trying to go around the block to the neighborhood convenience store near where they've lived for the past ten years. There might be something to the nasal iron theory, or there might be a deeper sense at play here, possibly one of the group of as yet unclassified senses based in the pineal body near the center of the brain.

Whatever the nature of this sense, there are also places where even people with a strong sense of direction will get completely disoriented. This is a qualitative phenomenon related to particular places. Sometimes the directions are offset, and at other places there is no possibility of orientation at all. A navigator can look from map to landmark, and back again, and never seem to find any bearing at all. The most extreme of these places could be called "directional anomalies".

For a place to truly qualify as a directional anomaly, there have to be several observers who have seen the same phenomenon over a period of time. It is best if the observers have not communicated about this beforehand. In some cases, the directional anomaly may be related to large iron deposits.

## COLORADO

One known anomaly is so strong, it shows up on pilot's maps. It is a few miles south-southwest of Steamboat Springs, Colorado.



Most of these maps have a red paragraph, hovering directly over an uninhabited forest, saying something like this:

WARNING: Do not rely on compass readings in this area. Compass needles will be completely erratic to an altitude of 7,000 feet or higher.

This one obviously involves a unique and strong magnetic field. The area is remote enough that ground observations are difficult to arrange.

Mountainous areas seem to contain more directional anomaly zones than other places. In fact, Oregon, the Black Hills of South Dakota, and Northern California, all contain "mystery house" tourist traps which are heavily promoted by billboard. In these places, a variety of illusions are enhanced for entertainment in special buildings. Exaggerated construction adds a lot of the desired effect, but underlying this is some force which we cannot yet measure reliably.

Areas near hot springs also may be associated with various anomalies. For example, occasional magnetic disturbances have been strong enough to reset watches and damage calculators near the hot springs at Thermopolis, Wyoming. In Glenwood Springs, an ordinary magnetic field measurement on a working electric meter near the Yampa Vapor Caves turned into a mystery, as the normal AC magnetic field was completely suppressed at a point where a reading of at least 5.0 milliGauss should have been found!

## NORTHERN CALIFORNIA

Just north of Arcata, California, there is a small suburban community called McKinleyville. Right at the entrance to the town is a sharp curve in the road, which then straightens out and goes through an area which is overgrown with odd-looking vines before reaching the first group of ordinary shopping center buildings. Three people interviewed for this article have noticed that this main road through the area, although running straight north, has a

"feeling" of running east. One native of the area said there is a large iron deposit in a hill there, which would be unusual in that part of California. Observations in the area included compass needle dips on a nearby back road, and a larger than expected magnetic field under a small primary electric feeder line along the main road.

In Eureka, California an especially intense anomaly is centered around an extraordinarily beautiful redwood grove which is a city park in the southeast quarter of town. Compass readings are normal, but unbelievable. The grove is in a small patch of dramatic slopes and valleys. Walking in the grove is close to a religious experience, and is in itself somewhat disorienting. The surrounding neighborhood is fairly typical for a place on the edge of a small city.

## A BACKWARDS GERMAN CATHEDRAL

People who frequent downtown Mainz, Germany, long ago gave up trying to figure out which direction is where. Local landmarks such as the train station and various statues are the only way directions are ever given in that area. The phenomenon seems to extend from the bank of the Rhine River to about two miles inland. There is a group of hot springs directly across the river from Mainz in Wiesbaden, which is a well-known spa appropriated by the Army Air Corps in the occupation of Germany after World War II.

One of the unique features of Mainz is that its cathedral, known locally as the Dom, is built backwards. It has long been Catholic policy to have all cathedrals built with the main door facing west, the altar to the east, so the parishioners are more or less facing Jerusalem. There are only two exceptions to this pattern: Mainz and the Basilica of St. Peter in Rome.

Knowing this, I took my handy little Boy Scout compass over to the Dom in January, 1992, and walked around it, holding the compass steady. The variations were remarkable, with the compass needle swaying as much as 30 degrees in each direction as I walked. These needle sways were sharper than any I had seen before outside of known large electrical equipment arrays, which did not exist in the vicinity of this ancient edifice.

## SOUTHWEST MISSOURI

Neosho, Missouri is host for another example of the extreme form of directional anomaly. For many years, numerous acquaintances have confirmed the same observation I made in the summer of 1977, while staying in the area for six weeks. Anywhere outside Neosho, directions seem to be normal, and I could always find North. At a certain point when entering the town, I always completely lost my sense of direction. In the town, the only way I could orient myself was relative to local buildings. This effect was consistent throughout the period I was there, and on every subsequent visit to the town.

Over the ensuing years, whenever the town has come up in conversation, I have gently steered to the topic of directions. Every single person I have spoken to on this subject, which amounts to several dozen by now, has had the same experience with Neosho. In fact, the exact places where the sense of direction is lost can be pinpointed at each entrance to town.

What's so special about Neosho? It is a small town, reposing quietly on the edge of the Ozarks in southwestern Missouri. Its only historical notoriety has come from the fact that for a brief time during the Civil War it was the Confederate capitol of Missouri. It seems ordinary in every respect, with the usual complement of hardware stores, a downtown section, and motels on the edges, just like every

other small town in Missouri.

Neosho does have a very large spring, close to the center of town. It is one of the largest freshwater springs on the North American continent. Another unusual thing about Neosho is the fact that "ghost lights" sometimes appear and move around in the woods just west of town. The origin of these lights has never been explained by anyone. It is possible that the lights are related to nearby fault lines. There have been earthquakes in the area in recent years, mostly centered near Coffeyville, Kansas, about 50 miles to the west. The strongest earthquake there has been around 5.5 on the Richter scale.

In November 1992, while passing through the area, I pulled off into the town for about an hour. As usual, I lost my sense of direction right at the town limits. At that time, I went directly to the Big Spring and pulled out the gaussmeter. While walking around the spring, consistent readings of 1.0 - 1.5 milliGauss were found. This was completely unexpected, because the nearest powerline is several hundred feet away, and it is a small residential feeder which ordinarily produces no magnetic field at ground level. One wire goes to a light pole in the middle of the park, but the readings were found at some distance from the pole as well, and again that type of light pole typically produces no measurable magnetic field. The ground is entirely too soggy for buried power cables, and the topography of the area is such that there would be no reason to run underground wires through.

So there has been a magnetic anomaly measured in Neosho. What is odd about this measurement is that AC magnetic fields simply do not occur in nature. How such a field appeared in the middle of a city park is a complete mystery. But it is consistent with the observed phenomenon of a directional anomaly.

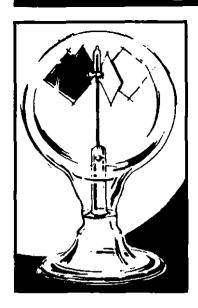
## CONCLUSION

Like other unexpected phenomena associated with the Earth, directional anomalies may have some significance. If nothing else, they are an interesting parameter, and can be a useful qualitative observation. Until more is known about this phenomenon, it would be best to avoid building directly in one, especially if AC magnetic fields are being found where they shouldn't be.

Knowing that many places where they occur are associated with earthquake zones, they may be useful in observations leading to predictions. If there is a variation in directional sense associated with places, there may also be variations in whatever force causes these. Since the magnetic environment is strong enough to cause confusion in some observers, it stands to reason that it may also be subject to intense fluctuations. Since the preliminary observations noted here show at least the possibility of magnetic disturbances, we could set up measuring equipment at any such site and begin to gather information. As time progresses, and the inevitable occasional earthquakes occur, we could then backtrack, find magnetic variations, and come up with a fairly reliable predictive tool.

MICHAEL RIVERSONG has a degree in Chinese language from the University of Colorado, and is a recognized expert on the design art of Feng Shui. He has been a musician since childhood. Since 1984, he has recorded over 13 albums of his original music on harp, flute, guitar, and other instruments. He is the author of Design Ecology (available from BSRF), a compendium of information and techniques for dealing with environmental situations. Michael currently travels extensively, performing, writing, and providing design consulting services.

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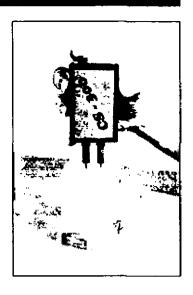
#### **BORDERLAND RESEARCH TOOLS**

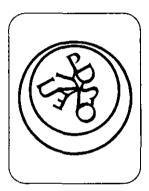
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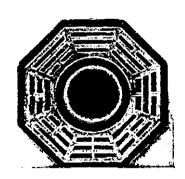
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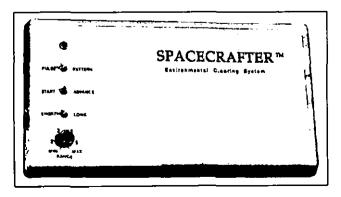
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Feng shui — wind and water, the art of adapting the residence of the living to harmonize with the cosmic breath — this ancient Chinese art possessed various objects to remedy geomantic defects. The Ba-gua, or Feng shui mirror is one of these objects which can be used to deflect sha qi, or "breath of ill fortune". Placed over your front door, or inside the home at strategic locations, the Ba-gua will redirect negative energies away from living areas. The Ba-gua is constructed from wood with a small circular mirror in the center and is painted green and red with gold trigrams. Ba-gua Mirror, #E0031, ... \$6.95





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# The Broadcast Power of Nikola Tesla

Part I

### by Gerry Vassilatos

THE drama of Twentieth Century Science and its intriguing relationship with financiers and governments unfold together in the remarkable life of Nikola Tesla. His is a biography replete with all the elements of tragedy. Tesla, a great discoverer of unsurpassed force, became the focal point of old insidious forces intent on destroying the future for the selfish sake of the status quo. Tesla remains a focal point of wonderment, of dream, and of worlds which yet should be to those who are familiar with his biography. For them, Tesla stands astride the quaint past century and the gleaming future. He is a technological Colossus, pointing the way to a new dawn.

The biography of Nikola Tesla should be the very first chapter in every child's science text. Yet, we find his name stricken from the record in every avenue of which he alone holds priority. This conspicuous absence prompts wonderment. What the world does with discoverers determines the world course. In the life of Nikola Tesla we see the portrayal of our own future, the fate of the world. The achievements of this researcher were lofty. The world has not yet implemented his greatest

works. For a time, all the world's dramatis personæ focussed on Tesla. He remains the legend, the theme, the archetype of all Twentieth Century scientists.

But who was Nikola Tesla, and where was he from? How did he reach such a mighty stature, and what did he actually invent? Tesla was born in 1856, the son of an illustrious Serbian family. His father, an Orthodox priest, his uncles noteworthy military heroes of highest rank. He was educated in Graz, and later moved to Budapest. Throughout his life he was blessed, or haunted, by vivid visions. In the terminology of Reichenbach he would be termed an extreme sensitive. It was through these remarkable visions that Nikola Tesla invented devices which the Victorian world had never seen. Indeed, his visionary experiences produced the modern



world as we know it.

He attended various Universities in Eastern Europe during his early adulthood. While delving into his studies, he became aware by the new and insidious scientific trends which questioned the validity of human sense and reason. An impassioned soul, Tesla felt the pain of modern humanity in its intellectual search for a soul. Finding no solace in any of his classes, he sought refuge in a more romantic treatment of science and nature. None could be found. Professors dutifully promoted the "new view" by which it was declared that the natural world was "inert...dead...a mere collection of forces".

This quantitative regime was mounting force among academes, who were then attempting the total conversion of scientific method.

Those who would not accept the new order were compelled to depart from academic pursuits. Tesla totally rejected these notions on the strongest of inner intuitions. Most of his instructors would have said that he was not University material. Tesla, sensitive to every such dogmatic wind, rejected their thesis and sought some better means for knowing nature. If he was to excel in engineering, there could only be cooperation with natural force, never violence. It was clear to him that the new scientific world-attack would ultimately lead to violent responses from nature itself.

His inner conflict expressed itself openly and candidly, bringing young Tesla into certain disrepute among rigid University authorities. Universities were more like military academies than places where original thinking was conducted in open forum. Tesla challenged too many persons of esteemed rank with probing questions for which he was given rebuke but no real answers.

A gifted researcher and voracious reader, he chanced upon some forgotten volumes of natural science written by Goethe. He had not been aware that Goethe, long before he chose poetry for

the vehicle of his scientific themes, had written several magnificent tomes on the natural world. Tesla found to his wonder that Goethe had experienced the very same emotions. When the new scientific dogma was just in its infancy, Goethe caught wind of it and reacted violently, even as one who stands watch in the night.

Goethe was well aware of the new scientific trend and its implications. The reduction of nature to forces and mechanisms was utterly revolting to Goethe. Now, Tesla found a notable compatriot in his experience. He secured a thorough collection of Goethe's scientific texts and read these to the exclusion of all other philosophies. It was through this window that we may comprehend all of Tesla's scientific methods and later statements. For in Tesla we see the quest

for communion with nature, one based on the faith that mind, sensation, consciousness, and ordained structure form the worldfoundations.

The sense-validating Qualitative Theme again appears in Nikola Tesla. Armed with this foundation, he was able to filter and qualify every other new study with which he was presented. In addition, he was irresistibly drawn into the study of electricity, the "new magick". In the following months, he absorbed the electrical engineering courses so rapidly that he no longer attended classes. He had taken a technical position in Budapest. Several new intuitions had seized him. Tesla became fascinated, obsessed with alternating current electricity. The problem he faced was considered insurmountable. Tesla was sure that he could devise an engine which was turned, not by contact-currents, but by magnetic field actions alone.

The struggle toward designing such a device, begun as a puzzling amusement, was now completely consuming his strength. The answer, tantalizing and near, seemed elusive. Undergirding all these efforts was the strongest desire to achieve something original, and by this, to attain financial independence for the sake of pure research. His only dream was to have a laboratory facility of his

The excessive labors and mental exertions nearly drove him to the brink of madness. He was, for as time, seized with strange maladies and sensitivities which physicians could not address. Reichenbach accurately describes these symptoms, characteristic of extreme sensitives. There come times when the neurological sensitivity of these individuals literally transforms and processes through their being. The emergence of these rare sensitivities affects such persons for the remainder of their lives.

Tesla found that his senses were amplified beyond reason. He was terribly frightened at first, nervous exhaustion permeating his frail being. Eventually learning to manage these rare faculties, he again resumed his life. But the visions which began in his youth were now more vivid and solid than ever before. When they came, unbidden, he could literally touch and walk around them. Now

> also, he was equal to receiving them. He was waiting for the revelation by which his alternating current motor

> Tesla's life came into a new focus while walking in a park with some friends, the year 1881. It was late afternoon, and Tesla became entranced with the sight of a glorious sunset. Moved to indescribable emotions, he began quoting a verse from Goethe's "Faust":

"The glow retreats, done is our day of toil;

it yonder hastes, new fields of life exploring,

ah, can no wing lift me from this

upon his track to follow, follow soaring?"

While yet a student, Tesla would appear. had became aware of cer-

> As he reached this last line of verse, Tesla was suddenly seized by an overwhelming vision. In it, he beheld a great vortex, whirling eternally in the sun and driving across the earth with its infinite power. Completely absorbed in this glory, he became catatonic and irresponsive...to the great fear of his companions. His mind and body buzzing with the power of the vision, he suddenly blurted out, "see my motor here...watch me reverse it". They shook him, believing he had lost his mind completely.

> Rigid and resisting all of their efforts, he would not move until the vision subsided. When he was finally led to a bench, he seemed completely transformed. The remainder of the day was spent in a grand and joyous celebration, Tesla's remaining funds supplying the feast. Throughout the long hours of that night he shared with his friends the great sight he had beheld. They spoke of the sure implications portended for the world's future, and departed with very great expectations.

Moving to Strassburg, he was employed as an engineer in a

tain scientific imperatives

enunciated by Johann von

Goethe. One of these was

the preservation and exten-

sion of all activities natural.

telephone subsidiary of the Continental Edison Company. It was in a small machine shop that he constructed the world's first brushless motors. He called them "magnetic vortex motors". Their whirling magnetic fields baffled electrical engineers. Now, Tesla's professors were studying his work. Goethe was absolute in his judgement of science and human nature: nature leads humanity to "follow, follow soaring".

Tesla's strange whirling devices worked on their very first trial. There were no connections between the rotors and stators, no sparking, lossy brushes. The motion was smooth and efficient. Numerous alternating current generators, transformers, and "brushless" motors, all were developed by Tesla in quick succession. The vision in material form. Himself a professional draftsman, he mapped out his entire Polyphase System. Tesla emigrated to America with a full portfolio of plans. America would be the place where his dreams would find fulfillment.

Continually attracted to engineering problems which none could master, his sudden visualization of the solutions became his normal mode of operation. In this respect, as well as others, he remained the wonder of all his technical assistants. He worked for Thomas Edison in New Jersey for a very short time period until securing a laboratory and financial supporters of his own.

In his first independent venture he developed arc lamps and lighting systems. When his financial supporters betrayed his trust, they left him bankrupt overnight. He became a ditch digger, suffering all the indignities which immigrants faced in America during the 1880's. He learned the value of publicity after his incessant mention of polyphase and alternating current managed to attract the attention of certain new financial supporters. They drew him out of the ditch, but not before he demanded his own laboratory, a machine shop, and a sizable personal percentage "up front". The result was our present day electrical distribution system.

Tesla did not invent alternating current. Tesla reinvented alternating current in the form of Polyphase Current. His Polyphase System was a novel means for blending three identical alternating currents together simultaneously, but "out of step". The idea was similar to having three pistons on a crankshaft rather than one. Tesla's method had wonderful advantages, especially when motors were to be operated. Formally, no one could make an alternating current motor turn at all simply because no net motion could be derived from a current which just "shuttled" to and fro.

Polyphase applied a continuous series of separate "pushes" to rotors. Tesla's Polyphase System made brushless motors and brilliant lighting methods possible. Polyphase made it also possible to send electrical power to very great distances with little loss. Alternating electrical currents vibrated in the line. Current did not flow continuously from end to end, as in Edison's flawed system. Edison's direct current system could not supply electricity beyond a few city blocks before current virtually disappeared.

In efforts to discover a more efficient kind of polyphase, Tesla explored higher frequency alternating currents. During this research, he built and patented several remarkable generators. Higher frequency polyphase was found by Tesla to perform with far greater efficacy than the common sixty-cycle variety which we still use. He fully intended on implementing these special generators in the system which his patron and friend, George Westinghouse, had proliferated. The business arrangement rendered Tesla fabu-

lously wealthy at a young age.

Tesla extended his generator frequencies in multiples of sixty until reaching some thirty thousand cycles per second. These very high frequency alternating current generators became the marvel of all the academic and engineering world. They were copied and modified by several other subsequent inventors including Alexanderson. Remarkably driven at excessive speeds, they constituted Tesla's first belief that high frequency alternating current generators would supply the world's power.

High frequency current phenomena were new and exceedingly curious. A line of experimental research was conducted in order to evaluate new safe and possibly more efficient ways for transmitting power along long elevated lines. Tesla stated that the transmission of such safe currents across very long powerline distances in the future would be a certainty, seeing their wonderful new qualities.

Tesla found that high frequency currents were harmless when contacted by the human body. Discharges from these generators traversed the outer surface of materials, never penetrating matter with depth. There was no danger when working with high frequency currents. He also observed their very curious and beautiful spark effects. They hissed and fizzled all over wire conductors, could stimulate luminescence in low pressure gas bulbs, seemed to traverse insulative barriers with ease, and made little pinwheels spin like delicate little fireworks displays.

Though curious, the effects were weak and furtive. They seemed to intimate some future technology which he was yet unable to penetrate. Tesla learned that his intuitions and visions were infallible. What he guessed usually proved true. This very personal revelation, he later claimed, was his greatest discovery.

As the safety of all personnel was his main concern, he was consumed with the idea of making his High Frequency Polyphase System completely safe for human operators and consumers alike. An extensive examination of each System component was undertaken with this aim in mind. Tesla was thorough and relentless in his quest for safety and efficiency.

But, his involvement with alternating currents would come to an abrupt and unexpected end. During a series of experiments which followed these high frequency tests, an amazing seldom-mentioned accident occurred in which Tesla observed a phenomenon which forever altered his view of electricity and technology.

#### SHOCKING DISCOVERY

Tesla was an avid and professional experimenter throughout his life. His curiosity was of such an intense nature that he was able to plumb the mysteries of an electrical peculiarity with no regard for his own comfort. Whereas Edison would work and sleep for a few hours on the floor, Tesla would never sleep until he had achieved success in an experimental venture. This marathon could last for days. He was once observed to work through a seventy two hour period without fatigue. His technicians were in awe of him.

The Victorian Era was flooding over with new electrical discoveries by the day. Keeping up with the sheer volume of strange electrical discoveries and curiosities was a task which Tesla thoroughly enjoyed...and preferred. His Polyphase System in perfect working order, the pleasurable occupation of studying new gazettes and scientific journals often fascinated his mind to the exclusion of all other responsibilities. A millionaire and world-



heralded genius before the age of thirty, Tesla sought the pure kind of research he had so long craved.

Whenever he observed any intriguing electrical effect he immediately launched into experimental study with a hundred variations. Each study brought him such a wealth of new knowledge that, based on phenomena which he observed, he was immediately able to formulate new inventions and acquire new patents.

Tesla's New York laboratories had several sections. This complex was arranged as a multi-level gallery, providing a complete research and production facility. Tesla fabricated several of his large transformers and generators in the lower floors, where the machine shops of this building were housed. The upper floors contained his private research laboratories. He had attracted a loyal staff of technicians. Of all these, Kolman Czito was a trusted friend who would stand by Tesla for the remainder of his life. Czito was the machine shop foreman in each of Tesla's New York laboratories.

Tesla observed that instantaneous applications of either direct or alternating current to lines often caused explosive effects. While these had obvious practical applications in improvement and safety, Tesla was seized by certain peculiar aspects of the phenomenon. He had observed these powerful blasts when knife-switches were quickly closed and opened in his Polyphase System. Switch terminals were often blasted to pieces when the speed of the switchman matched the current phase.

Tesla assessed the situation very accurately. Suddenly applied currents will stress conductors both electrically and mechanically. When the speed of the switch-action is brief enough, and the power reaches a sufficiently high crescendo, the effects are not unlike a miniature lightning stroke. Electricity initially heats the wire, bringing it to vapor point. The continual application of current then blasts the wire apart by electrostatic repulsion. But was this mechanistic explanation responsible for every part of the phenomenon?

The most refractory metals were said to be vaporized by such electrical blasts. Others had used this phenomenon to generate tiny granular diamonds. Yes, there were other aspects about this violent impulse phenomenon which tantalized him. Sufficiently intrigued, he developed a small lightning "generator" consisting of a high voltage dynamo and small capacitor storage bank. His idea was to blast sections of wire with lightning-like currents. He wanted to observe the mechanically explosive effects which wires sustain under sudden high-powered electrifications.

Instantaneous applications of high current and high voltage could literally convert thin wires into vapor. Charged to high direct current potentials, his capacitors were allowed to discharge across a section of thin wire. Tesla configured his test apparatus to eliminate all possible current alternations. The application of a single switch contact would here produce a single, explosive electrical surge: a direct current impulse resembling lightning. At first Tesla hand-operated the system,

manually snapping a heavy knife switch on and off. This became less favorable as the dynamo voltages were deliberately increased.

He quickly closed the large knife switch held in his gloved hand. Bang! The wire exploded. But as it did so, Tesla was stung by a pressure blast of needle-like penetrations. Closing the dynamo down, he rubbed his face, neck, arms, chest, and hands. The irritation was distinct. He thought while the dynamo whirred down to a slow spin. The blast was powerful. He must have been sprayed by hot metal droplets as small as smoke particles. Though he examined his person, he fortunately found no wounds. No evidence of the stinging blast which he so powerfully felt.

Placing a large glass plate between himself and the exploding wire, he performed the test again. Bang! The wire again turned to vapor...but the pressured stinging effect was still felt. But, what was this? How were these stinging effects able to penetrate the glass plate? Now he was not sure whether he was experiencing a pressure effect or an electrical one. The glass would have screened any mechanical shrapnel, but would not appreciably shield any electrical effects.

Through careful isolation of each experimental component, Tesla gradually realized that he was observing a very rare electrical phenomenon. Each "bang" produced the same unexpected shock response in Tesla, while exploding small wire sections into vapor. The instantaneous burst produced strange effects never observed with alternating currents. The painful shocking sensation appeared each time he closed or opened the switch. These sudden shock currents were IMPULSES, not alternations. What surprised him was the fact that these needle-like shocks were able to reach him from a distance: he was standing almost ten feet from the discharge site!

These electrical irritations expanded out of the wire in all directions and filled the room in a mystifying manner. He had never before observed such an effect. He thought that the hot metal vapor might be acting as a "carrier" for the electrical charges. This would explain the strong pressure wave accompanied by the sensation of electrical shock. He utilized longer wires. When the discharge wire was resistive enough, no explosion could occur.

Wire in place, the dynamo whirred at a slower speed. He threw the switch for a brief instant, and was again caught off guard by the

stinging pressure wave! The effect persisted despite the absence of an explosive conductor. Here was a genuine mystery. Hot vapor was not available to "carry" high voltage charges throughout the room. No charge carriers could be cited in this instance to explain the stinging nature of the pressure wave. So what was happening here?

The pressure wave was sharp and strong, like a miniature thunderclap. It felt strangely "electrical" when the dynamo voltage was sufficiently high. In fact, it was uncomfortably penetrating when the dynamo voltage was raised beyond certain thresholds. It became clear that these pressure waves might be electrified. Electrified soundwaves. Such a phenomenon would not be unexpected when high voltages were used. Perhaps he was fortunate enough to observe the rare phenomenon for the first time.

He asked questions. How and why did the charge jump out of the line in this strange manner? Here was a phenomenon which was not described in

any of the texts with which he was familiar. And he knew every written thing on electricity. Thinking that he was the victim of some subtle, and possibly deadly short circuit, he rigorously examined the circuit design. Though he searched, he could find no electrical leakages. There were simply no paths for any possible corona effects to find their way back into the switching terminal which he held.

Deciding to better insulate the arrangement in order that all possible line leakages could be eradicated, he again attempted the experiment. The knife switch rapidly closed and opened, he again felt the unpleasant shock just as painfully as before. Right through the glass shield! Now he was perplexed. Desiring total distance from the apparatus, he modified the system once more by making it "automatic".

He could freely walk around the room during the test. He could hold the shield or simply walk without it. A small rotary spark switch was arranged in place of the hand-held knife switch. The rotary switch was arranged to interrupt the dynamo current in slow, successive intervals. The system was actuated, the motor switch cranked it contacts slowly. Snap...snap...each contact produced the very same room-filling irritation.

This time it was most intense. Tesla could not get away from the shocks, regardless of his distance from the apparatus across his considerably large gallery hall. He scarcely could get near enough to deactivate the rotating switch. From what he was able to painfully observe, thin sparks of a bright blue-white color stood straight out of the line with each electrical contact.

The shock effects were felt far beyond the visible spark terminations. This seemed to indicate that their potential was far greater than the voltage applied to the line. A paradox! The dynamo

> charge was supplied at a tension of fifteen thousand volts, yet the stinging sparks were characteristics of electrostatic discharges exceeding some two hundred fifty thousand volts. Somehow this input current was being transformed into a much higher voltage by an unknown process. No natural explanation could be found. No scientific explanation sufficed. There was simply not enough data on the phenomenon for an answer. And Tesla knew that this was no ordinary phenomenon. Somewhere in the heart of this activity was a deep natural secret. Secrets of this kind always opened humanity into new revolutions.

> Tesla considered this strange voltage multiplying effect from several viewpoints. The problem centered around the fact that there was no magnetic induction taking place. Transformers raise or lower voltage when current is changing. Here were impulses. Change was happening during the impulse. But there was no

transformer in the circuit. No wires were close enough for magnetic inductions to take place. Without magnetic induction, there could theoretically be no transformation effect. No conversion from low to high voltage at all. Yet, each switch snap brought both the radiating blue-white sparks and their painful sting.

#### **IMPULSES**

Tesla noted that the strange sparks were more like electrostatic discharges. If the sparks had been direct current arcs reaching from the test line, he would surely have been killed with the very first close of the switch. The physical pressure and stinging pain of these sparks across such distances could not be explained. This phenomenon had never been reported by those who should have seen and felt its activities.

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Tesla gradually came to the conclusion that the shock effect was something new, something never before observed. He further concluded that the effect was never seen before because no one had ever constructed such a powerful impulse generator. No one had ever reported the phenomenon because no one had ever generated the phenomenon.

Tesla once envisioned a vortex of pure energy while looking into a sunset. The result of this great Providential vision was polyphase current. A true revelation. But this, this was an original discovery found through an accident. It was an empirical discovery of enormous significance. Here was a new electrical force, an utterly new species of electrical force which should have been incorporated into the electrical equations of James Clerk Maxwell. Surprisingly, it was not.

Tesla now questioned his own knowledge. He questioned the foundations on which he had placed so much confidence in the last several years. Maxwell was the "rule and measure" by which all of

Tesla's polyphase generators had been constructed. Tesla penetrated the validity of Maxwell's mathematical method. It was well known that Maxwell had derived his mathematical descriptions of electromagnetic induction from a great collection of available electrical phenomena. Perhaps he had not studied enough of the phenomena while doing so.

Perhaps newer phenomena had not been discovered, and were therefore unavailable to Maxwell for consideration. How was Maxwell justified in stating his equations as "final"? In deriving the laws of electromagnetic induction, Maxwell had imposed his own "selection process" when deciding which electrical effects were the "basic ones". There were innumerable electrical phenomena which had been observed since the eighteenth century. Maxwell had difficulty selecting what he considered to be "the most fundamental" induction effects from the start.

The selection process was purely arbitrary. After having "decided" which induction effects were "the most fundamental", Maxwell then reduced these selected cases and described them mathematically. His hope was to simplify matters for engineers who were designing new electrical machines. The results were producing "prejudicial" responses in engineers who could not bear the thought of any variations from the "standard". Tesla had experienced this kind of thematic propaganda before, when he was a student. The quantitative wave of blindness was catching up with him.

Tesla and others knew very well that there were strange and anomalous forms of electromagnetic induction which were constantly and accidentally being observed. These seemed to vary as the experimental apparatus varied. New electrical force discoveries were a regular feature of every Nature Magazine issue. Adamant in the confidence that all electrical phenomena had been both observed and mathematically described, academicians would be very slow to accept Tesla's claims.

But this academic sloth is not what bothered Tesla. He had already found adequate compensation for his superior knowledge in the world of industry. Tesla, now in possession of an effect which was not predicted by Maxwell, began to question his own knowledge. Had he become a "mechanist", the very thing which he reviled when a student? Empirical fact contradicted what that upon he based his whole life's work. Goethe taught that nature leads humanity.

The choice was clear: accept the empirical evidence and reject the conventional theory. For a time he struggled with a way to "derive" the shock effect phenomenon by mathematically wrestling "validity" from Maxwell's equations...but could not. A new electrical principle had been revealed. Tesla would take this, as he did the magnetic vortex, and from it weave a new world.

What had historically taken place was indeed unfortunate. Had Maxwell lived after Tesla's accidental discovery, then the effect might have been included in the laws. Of course, we have to assume that Maxwell would have "chosen" the phenomenon among those which he considered "fundamental".

There was no other way to see his new discovery now. Empirical fact contradicted theoretical base. Tesla was compelled to follow. The result was an epiphany which changed Tesla's inventive course. For the remainder of his life he would make scientific assertions which few could believe, and fewer yet would reproduce. There yet exist several reproducible electrical phenomena which cannot be predicted by Maxwell. They continually appear whenever adventuresome experimenters accidental observations.

High voltage impulse currents produced a hitherto unknown radiant effect. In fact, here was an electrical "broadcast" effect whose implementation in a myriad of bizarredesigns would set Tesla apart from all other inventors.

#### **FOCUS**

High voltage impulse currents produced a hitherto unknown radiant effect. In fact, here was an electrical "broadcast" effect whose implementation in a myriad of bizarre designs would set Tesla apart from all other inventors. This new electrical force effect was a pre-eminent discovery of great historical significance. Despite this fact, few academicians grasped its significance as such. Focussed now on dogmatizing Maxwell's work, they could not accept Tesla's excited announcements. Academes argued that Tesla's effect could not exist. They insisted that Tesla revise his statements.

Tesla's mysterious effect could not have been predicted by Maxwell because Maxwell did not incorporate it when formulating his equations. How could he have done so, when the phenomenon was just discovered? Tesla now pondered the academic ramifica-



Nikola Tesla, age 63.

tions of this new effect. What then of his own and possibly other electrical phenomena which were not incorporated into Maxwell's force laws? Would academes now ignore their existence? Would they now even dare to reject the possibility of such phenomena on the basis of an incomplete mathematical description?

Seeing that the effect could grant humanity enormous possibilities when once tamed, Tesla wished to study and implement the radiant electrical action under much safer conditions. The very first step which he took before proceeding with this experimental line was the construction of special grounded copper barriers: shields to block the electrical emanations from reaching him.

They were large, body sized mantles of relatively thick copper. He grounded these to insure his own complete safety. In electrical terms, they formed a "Faraday Cage" around him. This assembly would block out all static discharges from ever reaching Tesla during the tests. Now he could both observe and write what he saw

with confidence.

Positioned behind his copper mantle, Tesla initiated the action. ZZZZZZ...the motorized switch whirring, dynamo voltage interrupted several hundred times per second, the shock action was now continuous. He felt a steady rhythm of electrostatic irritations right through the barrier accompanied by a pressure wave which kept expanding. An impossibility. No electrical influence should have passed through the amount of copper which composed the shield. Yet this energetic effect was penetrating, electrically shocking, and pressured. He had no words to describe this aspect of the new phenomenon. The shocks really stung.

Tesla was sure that this new discovery would produce a completely new breed of inventions, once tamed and regulated. Its effects differed completely from those observed in high frequency alternating current. These special radiant sparks were the result of non-reversing impulses. In fact, this effect relied on the non-reversing nature of each applied burst for its appearance. A quick contact charge by a powerful high voltage dynamo was performing a feat of which no alternating generator was capable. Here was a demonstration of "broadcast electricity".

Most researchers and engineers are fixed in their view of Nikola Tesla and his discoveries. They seem curiously rigidified in the thought that his only realm of experimental developments lay in alternating current electricity. This is an erroneous conception which careful patent study reveals. Few recognize the documented facts that, after his work with alternating currents was completed, Tesla switched over completely to the study of impulse currents. His patents from this period to the end of his career are filled with the terminology equated with electrical impulses alone.

The secret lay principally in the direct current application in a small time interval. Tesla studied this time increment, believing that it might be possible to eliminate the pain field by shortening the length of time during which the switch contact is made. In a daring series of experiments, he developed rapid mechanical rotary switches which handled very high direct voltage potentials. Each contact lasted an average of one ten-thousandth second.

Exposing himself to such impulses of very low power, he discovered to his joy and amazement that the pain field was nearly absent. In its place was a strange pressure effect which could be felt right through the copper barriers. Increasing the power levels of this device produced no pain increase, but did produce an intriguing increased pressure field. The result of simple interrupted high voltage DC, the phenomenon was never before reported except by witnesses of close lightning strokes. This was erroneously attributed however to pressure effects in air.

Not able to properly comprehend their nature at first, Tesla also conservatively approached the pressure phenomenon as due to air pressure. He had first stated that the pressure field effect was due to sharp soundwaves which proceeded outward from the suddenly charged line. In fact, he reported this in a little-known publication where he first announced the discovery. Calling the pressure effects "electrified soundwaves", he described their penetrating nature in acoustic terms.

Further experimentation however, gradually brought the new awareness that both the observed pressure effect and electrical shock fields were not taking place in air at all. He demonstrated that these actions could take place in oil immersions. Impulse charged

lines were placed in mineral oil and carefully watched. Strong pressure projections emerged from sharp wire ends in the oil, as if air were streaming out under high pressure.

Tesla first believed that this stream was wire-absorbed air driven off by electrical pressure. Continual operation of the phenomenon convinced him that the projected stream was not air at all. Furthermore, he was not at a loss to explain the effect, but was reluctant to mention his own theory of what had been generated by high voltage direct current impulses.

Tesla made electrical measurements of this projective stream. One lead of a galvanometer was connected to a copper plate, the other grounded. When impulses were applied to wire line, the unattached and distant meter registered a continual direct current. Current through space without wires! Now here was something which impulses achieved, never observed with alternating currents of any frequency.

Analysis of this situation proved that electrical energy or electrically productive energies were being projected from the impulse device as rays, not waves. Tesla was amazed to find these rays absolutely longitudinal in their action through space, describing them in a patent as "light-like rays". These observations conformed with theoretical expectations described in 1854 by Kelvin.

In another article Tesla calls them "dark-rays", and "rays which are more light-like in character". The rays neither diminished with the inverse square of the distance nor the inverse of the distance from their source. They seemed to stretch out in a progressive shock-shell to great distances without any apparent loss.

#### **MAGNETIC ARCS**

Nikola Tesla now required greater power levels than those provided by his mechanical rotary switch system. He also saw the need for controlling ultra-rapid current interruptions of high repetition ("succession") rates. No mechanical switch could perform in this manner. He had to envision and devise some new means by which ultra-rapid interruptions could be obtained. In his best and most efficient system, highly charged capacitors were allowed to impulsively discharge across special heavy duty magnetic arcs.

The magnetic arc gap was capable of handling the large currents required by Tesla. In achieving powerful, sudden impulses of one polarity, these were the most durable. Horn shaped electrodes were positioned with a powerful permanent magnetic field. Placed at right angles to the arc itself, the currents which suddenly formed in this magnetic space were accelerated along the horns until they were extinguished. Rapidly extinguished!

Arcs were thus completely extinguished within a specified time increment. Tesla configured the circuit parameters so as to prevent capacitor alternations from occurring through the arc space. Each arc discharge represented a pure unidirectional impulse of very great power. No "contaminating current reversals" were possible or permissible.

Reversals...alternations...would ruin the "shock broadcast". The effect was never observed when alternating currents were engaged. High voltage was supplied by a large dynamo. Tesla could speed or slow this dynamo with a hand operated rheostat. Power was applied in parallel across the capacitor. The magnetic arc was

linked almost directly to one side of this capacitor, a long and thick copper strap connecting the magnetic arc and the far capacitor plate.

This simple asymmetric positioning of the magnetic arc discharger to one side of the dynamo supply produced pure unidirectional electropositive or electronegative impulses as desired. Tesla designed this very simple and powerfully effective automatic switching system for achieving ultra-rapid impulses of a single polarity. Capacitor values, arc distances, magnetic fields and dynamo voltages were all balanced and adjusted to yield a repetitive train of ultrashort singular impulses without "flyback" effects.

The system is not really well understood by engineers, the exceptional activities of the arc plasma introducing numerous additional features to the overall system, While the effects which Tesla claimed can be reproduced with electron tube impulse circuitry, these produce decidedly inferior effects. The overall power of the basic arc discharge is difficult to equal. Tesla eventually enclosed the magnetic arc, immersing the gap space in mineral oil. This blocked premature arcing, while very greatly increasing the system output.

Most imagine that the Tesla impulse system is merely a "very high frequency alternator". This is a completely erroneous notion, resulting in effects which can never equal those to which Tesla referred. The magnetic discharge device was a true stroke of genius. It rapidly extinguishes capacitor charge in a single disruptive blast. This rapid current rise and decline formed an impulse of extraordinary power. Tesla called this form of automatic arc switching a "disruptive discharge" circuit, distinguishing it from numerous other kinds of arc discharge systems. It is very simply a means for interrupting a high voltage direct current without allowing any backward current alternations. When these conditions are satisfied, the Tesla Effect is then observed.

The asymmetrical positioning of the capacitor and the magnetic arc determines the polarity of the impulse train. If the magnetic arc device is placed near the positive charging side, then the strap is charged negative and the resultant current discharge is decidedly negative.

Tesla approached the testing of his more powerful systems with certain fear. Each step of the testing process was necessarily a dangerous one. But he discovered that when the discharges exceeded ten thousand per second, the painful shock effect was absent. Nerves of the body were obviously incapable of registering the separate impulses. But this insensitivity could lead to a most seductive death. The deadly aspects of electricity might remain. Tesla was therefore all the more wary of the experiments.

He noticed that, though the pain field was gone, the familiar pressure effect remained. In its place came a defined and penetrating heat. Tesla was well aware that such heat could signal internal electrocution. He had already made a thorough study of these processes, recognizing that such heating precedes the formation of electrical arcs through the body. Nevertheless, he applied power to the dynamo in small but steady intervals.

Each increase brought increase in the internal heating effects. He remained poised at each power level, sensing and scoping his own physiology for danger signs. He continued raising the power level until the magnetic arc reached its full buzzing roar. Tesla

found that this heat could be adjusted and, when not extreme, was completely enjoyable. So soothing, relaxing, and comfortable was this manifestation that Tesla daily exposed himself to the energies. An electrical "sauna".

He later reported these findings in medical journals, freely offering the discovery to the medical world for its therapeutic benefits. Tesla was a notorious user of all such therapies from this time on, often falling into a deep sleep in the warm and penetrating influences. Once, having overindulged the electro-sauna therapy, he fell into a profoundly deep sleep from which he emerged a day later! He reported that this experience was not unpleasant, but realized that proper "electro-dosages" would necessarily have to be determined by medical personnel.

During this time, Tesla found shorter impulse lengths where the heating effect disappeared altogether, rendering the radiance absolutely harmless. These impulse trains were so very high that the deepest nerves of one's body could not sense the permeating radiant energy field. Now he could pursue his vision of broadcast energy systems without fear of rendering to humanity a technological curse, rather than a true blessing.

#### **TRANSFORMERS**

Tesla operated the magnetic arc system at higher power levels, experimenting with various impulse lengths and repetition rates. He measured the mysterious electrical current which apparently flowed through space from this system. These radiant fields operated at far greater power than before. Strange effects were suddenly appearing at certain distances from the magnetic impulser. For one thing, Tesla noticed that metallic surfaces near the impulser became covered with white brush-like corona discharges. While the sparks played in trails across the metal surfaces, Tesla observed physical movement among the metal objects. Tensions and rocking motions. Both phenomena occurring simultaneously, he was utterly fascinated. The sparks themselves seemed alive. The moving metal objects seemed to suggest new motor effects. What was this strange coalition, this synchronicity of phenomena?

Brilliant white coronas came forth with a gaseous "hissing" sound from metal points and edges. Metal plates were soon poised all around the device for observation. Tesla recognized at once that these effects were not identical with those obtained earlier while using high frequency alternating currents. These new discharges were white, energetic, and strong.

The electrical behavior of copper plates, rods, cylinders, and spheres near his primary impulser brought forth a great variety of white fluidic discharges. Strong discharge brushes appeared from the ends of copper plates. These came in prodigious volumes, hissing and arcing wildly in all directions, especially from sharp points. Tesla tried copper discs. These seemed to produce more stable discharges. He observed the curious manner in which these white discharges seemed to "race" around the disc edge at times, blending and separating with all the other sparks. Here was a greatly magnified example of Reichenbach's Od force perhaps!

He noted the manner in which white brush discharges appeared from copper conductors of different shapes. Each form, poised near his impulser, gave a characteristic corona distribution. This coronal correspondence with specific geometric form greatly impressed him. With certain metal forms the discharges were very fluidic in

appearance. Smooth, fluidic sheaths covered copper cylinders of specific size. This absolutely fascinated Tesla. There was an aerodynamic nature inherent in radiant electricity.

Copper cylinders produced remarkable volumes of white discharges. The discharges from certain sized cylinders were actually larger than those being applied. This inferred that an energy transformation effect was taking place within the cylinder. This reminded him of his initial observation with the shock-excited wires. Those which did not explode gave forth far greater voltages than were initially used. He had never understood why this was occurring. Here was another instance in which applied energy was seemingly magnified by a conductor. Why was this happening?

The key to understanding this bizarre phenomenon might be found here, he thought. He observed the discharges from copper cylinders of various diameters. Each became edged with white brush discharges when held near or actually placed within the conductive copper strap of the impulser. The discharge effect was most pronounced when cylinders were placed within the periphery of the copper strap.

Tesla noticed that white corona sheaths were actually covering the outer cylinder wall at times. These would appear, build in strength, and disappear on sudden discharge with a surprising length. The sheathing action was repetitive when the cylinder had a critically small volume. Very small cylinders behaved like rods, where discharges only appeared at their edges. The stability of these strange sheath discharges varied with cylinder diameter and length.

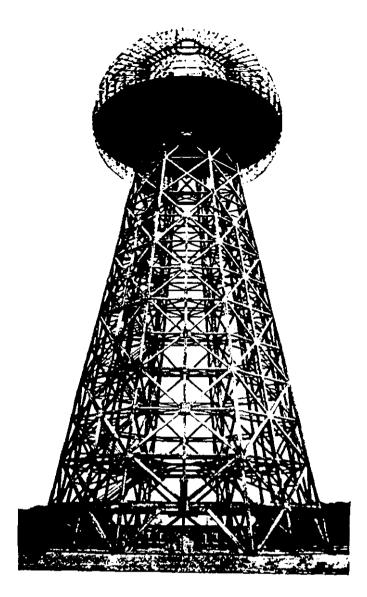
Tesla noticed that not every cylinder performed well near the impulser. Only cylinders of specific volume produced stable and continuous white electrical sheaths. If the cylinders were too small, then the sheaths were intermittent and unstable. There was an obvious connection between the supplied impulse train and the cylinder volume. But what was it?

Tesla surveyed the entire range of his recent discoveries. Impulses produced a radiant electrical effect. Radiant electricity, was mysteriously flowing through space. As it flowed, it focussed over metal conductors as a white fluidic corona. When the shape and volume of the metal conductors were just right, the energy appeared as a stable white corona of far greater voltage than the impulse generator supplied. More questions. More discoveries.

Rods produced sparks from their edges, but not as long as copper cylinders did. Tesla selected a cylinder which worked very well, and placed several horizontal "cuts" all around its surface. He was totally surprised when, on testing, the spark discharge from the cut cylinder was notably larger than before. Increased spark length means increased voltage. But why did this diminished conductivity force the voltage up?

The cuts diminished conductivity in the cylinder by forcing the energy into a tighter "squeeze". He had noted that electrical impulses displayed a tendency to traverse the outer surface of metal conductors. Certain cylinders were often ensheathed in a fluidic white discharge which smoothly travelled between coil ends in a tightly constricted layer. Here was something truly notable. His input voltage was far less than that produced from the upper coil terminal. But why from end to end?

The essential reason why current preferred outer surface conduction was precisely because they were impulsing. The sudden



shock which any conductor experienced produced an expansive effect, where the electrical charge was rejected by the conductive interior. This "skin effect" was a function of impulse time and conductor resistance. Highly resistant objects forced all of the impulse energy to the surface.

Now he was getting somewhere. Frustrated radiant electricity constricted into a tighter surface volume when encountering metal surfaces. This intense surface focussing effect brought the voltage up to tremendous values. Here was a new transformer effect! He believed it was an electrostatic transformation. Impulse currents each possessed an electrostatic nature. The bunching of charge in the impulser brings this electrostatic field to a peak in a small instant of time.

Constricting this field volume produces a greatly magnified voltage. Placement of any conductor in the field space alters the field by constricting its shape. When symmetrical conductors of special shape, volume, and resistance are placed in this space, the field is greatly constricted. Because the impulsing electrostatic field is very abrupt, it "snaps" over the conductor from end to end.

Tesla knew that here is where the secret lies. If resistance in the conductor is great enough, the snapping electrostatic force cannot move any charges. It is forced to "grow" over the conductor surface until it discharges at the end point, where greatly magnified voltages are obtained. When the wire diameter is small enough, the wire explodes under electrostatic pressures which exceed those seen in dynamite.

In effect, Tesla had managed to interrupt a high voltage direct current several thousand times per second. In doing so, he had discovered a way to completely separate electrostatic energy from current impulses. Tesla pondered these facts, wondering if it was possible to force the magnification effect beyond the limits of standard electromagnetic transformers. In other words, how high could voltage be raised? Was there a limit to the process?

In order to achieve such enormous voltage levels, he needed a conductive shape which offered so much resistance to charge movement, that all the applied energy would become electrostatic. In effect, Tesla wanted to convert a quantity of supply power into a pure electrostatic voltage. This phenomena suggested that his goal was not impossible.

Tesla extended his idea of the cut copper cylinder to coils. From the viewpoint of electrostatic impulses, flat copper coils appear to be "continuously cut" cylinders. The electrostatic field focuses over the coil as it did with the cylinders, from end to end. A simple magnet coil of specific volume would offer so much resistance that it would be difficult to predict the actual resultant voltage which results without an empirical test.

#### WHITEFIRE

Constructing several of these, he was ready for the test. When each copper magnet coil was impulsed, Tesla saw tremendous white brushes leaping from their free ends: discharges approaching one million volts! But his supply power was nowhere near these voltages, and the coil was not wrapped in thousands of windings. These previously unexpected voltage magnifications were the result of an energy transformation, one which took electrical power and converted it completely into pressure. Watts into Volts, an unheard thing. It was the key to a new and explosive technology.

Tesla also found that such coils required very thin coil forms. He ceased using cellulose and cardboard forms, preferring "squirrel cage" type forms made of thin end-braced wooden rods. Wire was wound about these cylindrically disposed rods, producing the very best effects. Spacings were also tried between successive coil windings with excellent results. Spaced windings reduced sparking to a minimum.

Tesla remarked that the electrostatic potentials along the coil surface (from end to end) could be as much as ten thousand volts per inch of winding! A ten inch coil of proper volume could produce one hundred thousand volt discharges. In addition, and in confirmation of his suspicions, no current was ever measured at the free terminals of these coils. A "zero coil current" condition! It was simply another paradox which would occupy the academicians for several more argumentative decades.

Tesla suddenly realized that coils represented a truly special and valuable component in his quest. The instantaneous resistance which any coil offered to an applied impulse was so immense that current could not flow through the wire length. As a phenomenal

consequence, no current flowed through the coil windings at all! But sparking was observed, travelling from coil end to end. Here was yet another anomaly!

He began placing these "secondary" coils within his "primary" impulser circuit. The strap which connected his magnetic arc to the capacitors formed the "primary". He made necessary distinctions among his Transformer components. Few engineers actually appreciate these distinctions. The "primary" and "secondary" of Tesla Transformers are not magnetic inductors. They are resistive capacitors. Coil-shaped capacitors! Tesla Transformer action is electrostatic induction.

There were conditions for the most efficient manifestation of the effect. Maxwell could not predict these values. Tesla empirically discovered most of the rules for impulse behavior. He found that the transformative abilities of these smooth copper coils were maximum when the coil mass equalled the mass of the impulser's conductive copper strap. It did not matter how thin the coil windings were. The equality of copper masses brought maximum transformative effects. When this equal mass condition was fulfilled, Tesla said that the coil-capacitors were "in resonance". Electrostatic resonance.

Tesla found it possible to produce millions of electrostatic volts by this method. His first Transformers were horizontal in orientation, both free ends of the secondary coil-capacitor producing unidirectional impulses of great power. White discharges from each of these free ends had very different characteristics, indicating the unidirectional flow. Electropositive terminals always appeared brushlike and broad. Electronegative terminals always appeared constricted and dartlike.

His next Transformer series employed vertical cylinders with the base connected directly to ground. Free terminals stood quite a distance above the primary capacitor strap, spouting a brilliant white crown. These marked a turning point in his theories concerning electricity, since it was possible for him to develop well over one million volts impulse power in a device scarcely taller than a child.

These discharges were of an intense white coloration. Whitefire. Very sudden impulses color discharge channels with the brilliant whitefire because Tesla Transformers separate the effusive æther from electrons. Tesla Transformer conduct æther, not electrons. The whitefire brilliance is the distinctive ætheric trademark of Tesla Transformers.

During this time, Tesla discovered the peculiar necessity for streamlining his Transformers. Cylindrical secondary capacitors suddenly became conical forms. These presented the most bizarre appearance of all. Tesla used cone-shaped secondaries to focus the impulses. Whitefire discharges from these forms evidenced real focussing effects, the discharges themselves assuming inverted conical shapes. Their greatly intensified nature is seen in photographs which were taken under his own intrigued supervision. The magnified voltages were reaching those thresholds in which his laboratory enclosures were far too small to continue making industrial scale progress on radiant energy systems.

The fact that whitefire discharges pass through all matter, notably insulators, revealed the ætheric nature. Tesla saw that whitefire discharges could permeate all materials in a strangely gaseous manner. This penetration scarcely heated matter. In fact, the whitefire brushes often had a cooling effect. The sparks

themselves, though violent in appearance, were "soft" when compared to all other forms of electricity. He had successfully removed the hazard from electricity. In blocking the slow and dense charges, he had freed the mysterious effusive æther streams inherent in electricity. Because of this, new and intensified radiant effects were constantly making their appearance across his laboratory space.

Tesla found that as these new "Impulse Transformers" greatly magnified power supplied to them, so also their radiant electric effects were equally magnified. He found it possible to wirelessly project electrostatic power to very great distances, lighting special lamps to full candlepower at hundreds of feet. In these experiments, he also conceived of signalling systems. It would be possible to switch radiant effects in telegraphic fashion. Distant vacuum tube receivers would then light or dim in corresponding manner. Tesla experimented with a special breed of telegraphic wireless in 1890.

He also found it possible to wirelessly operate specially constructed motors by properly intercepting this space-flowing energy stream. He had made his own polyphase system obsolete! The new vision was vastly more enthralling. The world would be transformed. He discovered ways to beam the energy out to any focus, even to the zenith. His plan to illuminate the night sky with a radiant energy beacon captured the minds of all who listened.

Tesla now possessed the means by which the radiant electricity could be greatly magnified and transmitted. He could now transform the very nature of the radiance so that it could carry increasingly greater power. Now he could begin developing a new technology which would completely revitalize the world order. Power could be broadcast to any location without wire connections. Radiant electricity could be utilized in completely new appliances. A new world was about to be released!

#### SPACE FLOWING CURRENT

Understanding the analogue between these electrical impulse effects and the behavior of high pressure gases was of paramount importance. This gaseous aspect of impulse electrical radiance was perhaps the most mystifying aspect of these new-found energies. Those who sought out Tesla's every lecture were very aware that a new electrical species had been discovered.

While yet a student, Tesla had became aware of certain scientific imperatives enunciated by Johann von Goethe. One of these was the preservation and extension of all activities-natural. Goethe implied that when natural conditions were preserved during experimentation, then nature itself was in the best configuration to reveal more unified phenomenal exhibitions to qualitative observers.

Tesla recognized that his new discovery of impulse, the result of an accident, was a total departure from polyphase alternating current. While his original vision of the vortex was applied by him to the designing of motors and generators, Tesla now realized that this was not its primary message. In fact, taken from the viewpoint which Goethe expressed, polyphase was a most unnatural form of energy.

Natural activity is suffused with impulses, not alternations. Natural activity is initiated as a primary impulse. Nature is flooded with impulses of all kinds. From lightning to nervous activities, all

natural energy movements occur as impulses. Impulses were now seen by Tesla to fill the natural world. But, more fundamentally, Tesla saw that impulses flood the metaphysical world.

The mysterious flow of meanings during conversation occurs as a sequence of directed impulses in space. Though inert air vibrates in alternations with sounds uttered, the flow of meaning remains unidirectional. Intentions are also impulses. The unidirectional flow of intentions appear as impulses. Motivations proceed from the manifestation of sudden desires. Overtly expressed as actions, the initiating impulses are then fulfilled.

Tesla wished to comprehend where this "motivating force" came from, and where it went during the expressed actions. In all of this, he was very much the wonderful stereotype of the Victorian natural philosopher. His scientific pursuits followed these considerations until the last. Those who study his announcements recognize his metaphysical foundations, the basis of all his subsequent scientific quests.

Tesla observed the amazing "coordination" of new phenomena which daily seemed to bring new technological potentials before him. This wonderful synchronicity, this vortex, revealed his new and fortunate position in nature. Having somehow "broken" his fixation with the unnatural...with polyphase...he re-entered the natural once again. Impulses. Could it be that the induction of electrical impulses summoned the other impulse characteristics of nature? Was he producing a metaphysical vortex, into which all the impulse phenomena of nature would now flow? Was this the real sunset message which seized him in Budapest, so many years ago? Was electricity the fundamental natural energy...the motivator?

Victorian Science was not exactly sure what electricity was, there being so very many attributes associated with the term. Seventeenth and Eighteenth Century natural philosophers conjectured on the nature of both electric and magnetic forces. Gilbert and Descartes

shared the belief that these forces were a special kind of "flowing charge", a space radiant stream which took place in tightly constricted lines. Some equated the electromagnetic forces with a "dark light", which Karl von Reichenbach later proved in part.

Faraday adopted and modified the view that electromagnetic forces acted through space because they were a special flow of charge. This effusive charge movement changed when travelling through conductors, becoming more densified and retarded in velocity. Faraday's "lines of force" were not conceived by him to be mere static tensions as modernists view them. Faraday envisioned these force lines as radiant, streaming lines. They were mobile, moving longitudinally into space.

Others would change the names, referring to electric force lines as "dia-electric" or dielectric flux, but the view remained essentially as conceived by Faraday. Young James Clerk Maxwell also believed that force lines were dynamic, longitudinal lines of flow. But flowlines of what substance? Here lay the principle problem which occupied physicists throughout the Victorian Era.

Victorian researchers and natural philosophers wished to discover the exact nature of the "flowing charge" of which force lines were composed. Most agreed that the mysterious flowing "substance" had to be an effusive, ultra-gaseous flux. This flux was composed of infinitesimal energy particles which effected the various pressures and inductions observed.

Henry and Faraday struggled with the idea of deriving usable electric power from static charges. The notions was that, since forcelines were made of a "flowing charge substance", then fixed contacts placed on charged masses would supply electrical power forever. No one was able, however, to derive this flowing charge. Lossy discharges preceded every contact. Most researchers, whose

> attempts with highly charged Leyden Jars failed, sought a more benign source of concentrated charge. The quest shifted to magnets, but the attempt remained as futile as ever. There remained no available way to derive power from the individual flowing charges of a forceline.

> I.I. Thomson discovered electrons in vacuum discharges, assuming that these "electric particles" operated in all instances where electrical activity was observed. Victorian researchers did not accept this view completely. Thomson's "electrons" were viewed as the result of violent collisions across a vacuum acceleration space. It was not possible to ascertain whether these same "Thomson currents" were active within electrical conductors operating at small volt-

> Very reputable experimenters besides Tesla continued claiming that "space flowing electricity" is the real electricity. Tesla's classic demonstrations proved that rapid

electrical impulses actually exceed the ability of fixed charges to transmit the applied forces. Charges lag where electrostatic forces continue propagating. One is compelled to see that electrostatic forces precede the movement of charges.

Tesla saw that electrostatic impulses could flow without line charges. His "zero current coils" operated simply because the charges themselves were immobilized. Electricity was shown to be more in the nature of a flowing force rather than a stream of massive particles. But what then was this "flowing current"?

In Tesla's view, radiant electricity is a space flowing current which is NOT made of electrons. Later Victorians believed that there was a substance which both filled all space and permeated all matter. Several serious researchers claimed to have identified this gas. Notables, such as Mendeleev predicted the existence of

Very reputable experimenters besides Tesla continued claiming that "space flowing electricity" is the real electricity. Tesla's classic demonstrations proved that rapid electrical impulses actually exceed the ability of fixed charges to transmit the applied forces.

several ultra-rare gases which preceded hydrogen. These, he claimed, were inert gases. This is why they were rarely detected. The inert gases which Mendeleev predicted formed an atmosphere which flooded all of space. These gaseous mixtures composed the æther.

Tesla and others believed that both electrical and magnetic forces were actually streams of æther gas which had been fixated in matter. Materials were somehow "polarized" by various "frictive" treatments by which an æther gas flow was induced in them. Most materials could maintain the flow indefinitely, since no work was required on their part. Matter had only to remain polarized, transducing the æther flow. The æther gas contained all the power. Unlimited power.

This æther gas power manifested as the electromagnetic forces themselves, adequate reason to pursue the development of an æther gas engine. Such an engine could run forever on the eternal kinetic energies of the æther itself, it being both generated and driven by the stars.

Tesla believed that radiant electricity is composed of æther gas. He based this belief on the fact that his zero current coils were not conducting the "slow and dense" charges usually observed in ordinary electrical circuits. Abrupt impulses produced distinctive and different effects...fluidic effects. The qualities ascribed by Tesla to "electricity" or things "electrical" in his numerous patent texts and press interviews are those which refer to the æther gas. Tesla did not refer to electron currents as "electricity". He did not equate "electricity" with electron flow. Whenever Tesla spoke of "electrical" effects he always described their effusive, gaseous quality.

Tesla referred to space as the "ambient or natural medium". Space, he claimed, was that which "conducts electricity". He had found a means by which this gaseous electrical flow could be greatly concentrated, magnified, and directed. He saw that this radiant electricity was, in reality, a gaseous emanation. An ætheric emanation. This is why he made constant reference to fluidic terminology throughout his lectures.

Resistance, volume, capacity, reservoir, surface area, tension, pressure, pressure release: these were the terms upon which Tesla relied throughout his presentations. The terminology of hydraulics. Tesla also recognized that because æther was a gas, it had aerodynamic requirements.

Æther, in Tesla's lexicon, was space flowing electricity: a gas of superlative and transcendent qualities. Æther was the electricity which filled all of space, a vast reservoir of unsurpassable power. Motive, dynamic, and free for the taking. Æther gas technology would revolutionize the world. Æther gas engines would provide an eternal power source for the world. Science, industry, corporations, financial alignments, social orders, nations...everything would change. 

(Part 2 in next issue)

GERRY VASSILATOS began writing for Borderlands magazine several years ago. He is the producer of the Ray of Discovery video documentary series, Aura Motors, Earth Tones, and is also the author of the Vril Compendium — a borderland research encyclopedia which now totals 11 volumes. As an avid experimenter, Mr. Vassilatos has contributed to several advancements in the fields of Radionics and energy research. This is his fifth biography in an ongoing series of the borderland "greats".

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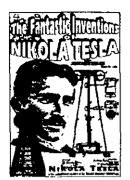
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The biography of Nikola Tesla is set entirely in New York City. Despite this remarkable fact, no one has ever undertaken a video search of his haunts and whereabouts. To know the setting of Tesla's life is to know more of him and his inventive process. Many Tesla enthusiasts have read his biography repeatedly, each time growing familiar with the many locations mentioned. But where did he walk during the night? Where were the probable sites of his several laboratory locations? Are there connections to be found among these settings and his discoveries? Why did he strive to develop radiant electrical systems? What exactly was his relationship with Kathy Underwood Johnson? And Anne Morgan...did her famous "fatal obsession" with Tesla lead her to instigate a reprisal which later nearly killed him? For what later reasons did Tesla decide to broadcast special psychotronic energies from Wardenclyffe, vengefully using an unwitting Morgan as his patron? What exactly was the "Human Energy" which he so often mentioned after the Century's turn? Come for a long walk with Gerry Vassilatos through the City where Tesla's radiant thoughts may yet be felt! Tesla Downtown shows the early years, steeped in the beautifully omate Victorian style: Grand Street, Houston, South Fifth, Delmonico's, Rutherford Square. Tesla's Uptown is an excursion into the "fabulous thirties": The Waldorf, Bryant Park, The Manhattan Library, the Morgan Estate. Spanning the time period between Victorian and Art Deco, we find ourselves walking back through hallways of time into the mind of Nikola Tesla. The flowing images of these fabulous locations form the backdrop for an astounding journey into new thought concerning Tesla, his personality, and his inventive process. #V0048, VHS, 60 mins., ... \$19.95



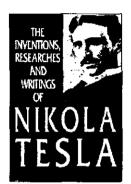
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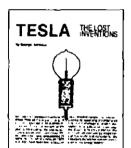
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# Ether Dynamics of the "Dome Fire"

by Peter A. Lindemann

HE phone rang at about 9:30 PM. I was not feeling very well and was already in bed. For the last three days, it seemed as if I had contracted a low grade "flu". But there was something different about this "flu". Both my wife and I had a fairly disturbed sleep the night before. It was now Monday, April 29th, (1996) the fifth night since the beginning of the "Dome Fire" near Los Alamos, New Mexico.

On the phone was my friend Ajna Luminaria, calling from Scottsdale, Arizona. She told me that she thought they were experiencing some unusual, subtle energy effects from the New Mexico fire in the Phoenix area, and did I think any radiation was coming from the fire? It seemed unlikely that any radiation was coming from the fire or that it could be traveling 350 miles against the wind to Scottsdale, but I told her I'd look into it. After all, Ajna had previously alerted me to the unlikely hazards of Bar Codes. Maybe something unusual was happening. All I knew was that I felt pretty weird.

I got up and went into a meditation on the fire. Within 20 minutes, I had a clear insight into the situation. A "new" phenomenon was happening, something I never dreamed possible. Everything that has happened since that night has only confirmed the following. We have witnessed a "new" Etheric phenomenon.

The "Dome Fire" was acting like a huge radionic broadcaster! There were two primary lines of radionic information being emitted by the fire. The first was a very strong FIRE ELEMENT emission. Not everyone was disturbed by this, but those of us who were sensitive to it felt like we were being cooked from the inside. And, there was no way to shield ourselves from it. Drinking lots of water helped slightly. The second was a strong RADIATION emission that manifested itself as 3 specific locations on the controls of the SpaceCrafter that would not clear. This was particularly alarming, since I had NEVER seen a subtle energy signature that the SpaceCrafter could not clear immediately. This indicated that it was an active emission.

By Wednesday, May 1, 1996, the FIRE ELEMENT broadcast was almost gone. On Saturday, May 4, 1996, the RADIATION lines on the SpaceCrafter were softening. As of this writing on May 11, one week later, the effects are 99% reduced and all that is left is a general emotional malaise and a mild sense of fatigue. These questions remain: What was different about this fire? Why did it behave like a huge Radionic Broadcaster? To understand this, a little history may help.

The area around Los Alamos, New Mexico has been contaminated by releases of low levels of radioactive materials for nearly its entire 50 year history. The Federal Government denied this practice during the "Cold War" period, but was eventually forced to admit that periodic "accidental" releases did occur. By the time they did admit what was happening, they always claimed that the

amount released on any given day was "safe" or "not harmful". Just downwind, Santa Fe, New Mexico is considered by many sensitives to be prone to these "high radiation days" and unsafe to live near at all times. DOR clouds can be seen regularly in Santa Fe, which is downwind of Los Alamos. Santa Fe has, on average, about 100 days a year with DOR clouds. By contrast, at my house 70 miles south of Santa Fe, I can remember only 1 day in the last 3 years when there were DOR clouds immediately overhead.

The Etheric conditions that produced the Radionic Broadcast from the fire are a genuine mystery. I do not know WHY it happened. The following explanation is my current hypothesis. What is known is that this event occurred during the intense burning of a mildly radioactive forest.

The Etheric response to a wide-spread, low level radiation is a generalized, low-grade EXPANSION, as well as a degrading of the ELASTIC characteristics of the field. Until the fire, this condition has not seemed to be anymore alarming than hundreds of other environmental problems. These general conditions do not seem to be adequate to explain the broadcast from the fire. So, we must look deeper into the situation.

Every little microscopic speck of radioactive material is surrounded by a volume of space where the Ether is very expanded and its elastic characteristics have been lost entirely. Wilhelm Reich called this set of conditions "ORANUR". The elastic characteristic of the Ether is responsible for its ability to "Pulsate", to animate living things, and also to be "Patterned", (to carry subtle energy information, like a Radionic Broadcast). Immediately surrounding this area is a volume where the Ether establishes a BOUNDARY that separates the "destroyed" etheric conditions on the inside, surrounding the radioactive material, from the "damaged" conditions on the outside. This boundary layer usually consists of Ether at a higher density and potential than the surrounding. This is the area where DOR is formed. Here, the elastic character of the Ether is damaged, but not destroyed. Its pulsation is rigid and weak, and the patterns it carries are toxic (life negative). Beyond this, the Ether sets up a final boundary to contain the damaged area. Outside of this final boundary, the Etheric forces are "healthy" and can pulsate and animate life normally and be patterned with life positive information. This process of the healthy Ether protecting itself from areas where its character has been destroyed or damaged, Wilhelm Reich called "sequestration". The fire may have partially short-circuited the Ether's ability to sequester these conditions.

We have every reason to believe that millions and millions of microscopic bits of radioactive material have become incorporated into the vegetation of the forests surrounding Los Alamos National Laboratories. This was the fuel for the "Dome Fire". Etherically speaking, fire is an emission of both Warmth Ether and

Light Ether; and for all intents and purposes, Light Ether is the primary carrier of radionic information. We now have all of the elements to understand the situation.

When the fire entered the Etherically sequestered boundary surrounding a radioactive particle, the Light Ether was impressed with all of the elements present at the time: 1) High Etheric potential surrounding an enclosed low Etheric potential (this acted like the radionic amplifier or etheric feed point); 2) Fire Element; 3) DOR and ORANUR. The Light Ether emitted by the fire was now capable of carrying "information" about conditions within the sequestration zone beyond the sequestration boundary. It also had the signature of its "carrier-wave" in it, the element of the fire itself. As the fire raced through the radioactively contaminated area, this set of conditions was temporarily created millions of times. To my knowledge, this kind of "Natural Event" has never been identified before. This theoretical explanation of why the fire was capable of being a radionic broadcaster is open to debate. I am open to discussing any other intelligent analysis.

The ability of the Etheric Envelope of the Planet to sequester noxious aspects of itself is the ONLY REASON we are still alive on this horribly polluted space-organism. This final line of Etheric Defense for all the Life on Earth has now been breached. It took over 7 days for the Ether to heal itself of this "EVENT". Those of us who lived through this consciously are very alarmed.

The distance the various effects traveled is unknown. Nothing we were able to do here in the Albuquerque area was effective at lessening the impact on our health. On the night of April 29, the effects of the Fire Element broadcast were clearly evident in Scottsdale, AZ, and as far away as Los Angeles, CA. Downwind, as far away as Arlington, Texas, people had "flu" like symptoms that were non-responsive to treatment, beginning about May 1. It is, therefore, also possible that the smoke from the "Dome Fire" was mildly radioactive. I have no "proof" of this, but it does follow the same line of logic.

It is not my policy to leave you, the reader, in a state of despair at the end of one of my articles. Unfortunately, I have not drawn any hopeful conclusions from this situation. Therefore, my only advice is to smile, and enjoy the rest of your day anyway.

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# Earth - Chi (Life Force) Energies in Motion

#### Dowsing with the Original Cameron Aurameter

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HE subject of this article is directed toward finding the presence of Earth's natural chi energy flows, their type, outline, direction, velocity, specialized behavior and likely purpose.

I first became acquainted with the active qualities of chi flows in 1967, while working in the field with the late Dowsing Master, Verne L. Cameron. We were not specifically searching for chi, instead our purpose was to locate water-bearing earthquake faults, rifts, vents, and shattered rock formations lying below earth's surface. The dowsing process required a careful patterning of subterranean configurations, but only those open rock formations which contained flowing, Primary (new) Waters.

One must first intuitively locate the moving, underground waters and then define the open rock channels containing them. These rock water conduits and structures are known by many names, such as: rifts, fissures, bedding planes, vents, domes and orifices of one sort or another. Along with these, one will find veins, streams, aquifers, water pockets and so-called water tables. Each of these must be specifically defined, for one or more may overlie, or conjunct with others. While the patterning inscribed, or noted with markers above ground is two-dimensional in nature, skillful dowsing requires three (even four) dimensional and wholistic perceptions of the structures involved below ground. Moreover, one must gain an intuitive understanding of what these flowing waters are doing within their containments.

By applying certain dowsing skills, one may determine the depth, direction, velocity and estimated volume of these subterranean water flows. A number of other important considerations must also be taken into account, such as determining qualities, temperatures, potability and a host of other information before the Primary Waterwell is drilled.

So, in this sense, we were dowsing for various aspects of chi energies, without focusing on the word meaning of this peculiar life force, which according to Feng Shui principles, permeates all things throughout the universe. Cameron, before his passing in 1970, often spoke of telluric (earth) currents, along with ley-lines, earth grids and the pre-physical, numinous ether. But again, detecting and fathoming these energy manifestations were only accessory to the main water dowsing work.

Then, in the early 1970's, a library of Feng Shui research — about half appearing in Chinese came into my hands. I had it translated to conform with the other half, which already appeared in English. After going over these precious, unpublished Feng Shui documents, and then experimenting with this ancient science in the field, I found them completely compatible with my professional dowsing work. In my case, it was as though ancient cultural and modern western sciences met in agreement for the first time, validating and embellishing prior discoveries I had made through years of professional dowsing work. Some of these discoveries were

as follows:

Chi originates as Wu-Chi in a teeming chaotic sea of energy, which then as an ordering principle, becomes the first indications of Tai-Chi, which then splits up into the complementary (opposing) forces of yang (male) positive and yin (female) negative. Then, as yin and yang merge into oneness Tai-Chi may then enter manifestation.

Having a workable concept of yin and yang balances, and their chi expressions, enables the Dowser to read their vital signs. But it is important to remember that an immense scale of chi vibrations and their specific types exist in an invisible spectrum. Briefly, some of these include earth, water, air, fire and many other types of animate and inanimate chi. One could fill pages describing the different kinds of chi in and surrounding all life as we know it. Thus, a Dowser develops his skills by searching for, and recognizing a particular chi quality, its behavior, and how it relates to the presence of other chi influences.

Linear constructs create "Secret Arrows" wherever chi flows for some distance without interruption along straight lines. In time, as this yang chi gains too much velocity, it suddenly becomes its opposite yin, inviting stagnation (atrophy). Conversely, too much yin stagnation invites overstimulation (yang).

This is a key point in better understanding how nature — the world's greatest economist and manager — continuously compensates to balance undisciplined energy flows. For this reason, I long ago lost my enchantment with the notion that being situated on a ley-line was the ultimate experience. Ley lines need managing. The ancients understood the principle and created appropriate remedies with standing stones, stone circles and maypoles and village centers to slow high velocity chi down.

By contrast, Feng Shui calls for right recognition and use of "dragons", curved lines, winding channels and so on. These sinuous, graceful lines and forms tend to slow the chi's movements down, creating a more desirable yin-yang balance. The environment responds with healthy proliferation of life forms and abundance, both visible and invisible. Earth chi is nurtured by good water, and vice-versa.

As mentioned, it is the recognition of various chi manifestations, their interactions with one another, their yin-yang balances, and proper distribution, both inside and outside of natural and manmade forms. At their extremes, when chi flows for any reason become disorganized or misappropriated, nature steps in with the suddenness we recognize as upheavals: hurricanes, floods, earth-quakes, volcanic upheavals, firestorms and the like. On a personal level, we see it as healthy minds and bodies becoming unhealthy. The chi flows are out of control. Well-beingness requires one's working with, and maintaining yin-yang balances of all chi. Mother earth offers us a grand opportunity to benefit, by intuitively tuning into the myriad harmonies of an abundant nature.



# The Pundit Curmudgeon

## Specialized Factors Relating to Subtle Energy Patent Applications in the US

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NY US patent application has to overcome a series of barriers in order to mature into a patent. Any such application pertaining to creating, manipulating or using subtle energy must overcome all of these barriers and, if it does not relate to an established or recognized area of technology, an additional obstacle — the reluctance of most individuals to accept new or differently presented knowledge which is alien to their belief systems.

The primary obstacles all applications must surmount to issue as patents are often summarized by stating that an invention is patentable if it is "new, useful, and unobvious". This statement is so simplistic as to be somewhat inaccurate. It is better to state that at least in theory a patent can normally be obtained by prosecuting an application properly describing and claiming an invention if the invention, as of the effective filing date of the application, is new in the sense that there is no legally acceptable prior information ("prior art") showing that the invention is not new or lacks novelty; is at least questionably useful in the sense that a utility which is not contrary to public policy can be attributed to it; and, is unobvious in view of the same legally acceptable prior information.

This last sentence is not easy to understand. It involves many different topics as are set forth in what is often referred to as the "Patent Law" — Title 35 of the US Code. The "fundamental" requirements of what must be disclosed relative to an invention and how the invention must be claimed in a patent application are set forth in 35 USC § 112. The requirements that a patentable invention must be new and useful are set forth in 35 USC § 101. The concept of what constitutes "prior art" capable of being used against an application is primarily established by or based on 35 USC § 102, and the unobvious requirement for patentability is based on 35 USC § 103.

These and other sections of the Patent Law are supplemented by Rules of the US Patent and Trademarks Office (PTO) pertaining to patent matters (Rules), a massive collection of prior decisions, a PTO publication entitled "The Manual of Patent Examining Procedure" (MPEP), various published notices or policy pronouncements of the PTO, and an occasional unofficial practice or procedure followed by one or more examiners or examining groups. None of these changes the basic Patent Law as set forth in 35 USC; they govern the functioning of the PTO, and in addition, indicate what the various sections of 35 USC mean and how they should be applied.

The task of reviewing applications, searching out the applicable prior art, and applying this art to the claims of the application in accordance with the Patent Law, the Rules, the MPEP, prior decisions and various notices or policy statements, and other practices and procedures falls on the examiners of the PTO. These individuals are critical to any patent applicant. They are humans having normal reactions and prejudices.

Usually, but not always, these individuals have at least some background in the field of any application they act upon. Since they occasionally lack "good" backgrounds in the fields of the applications they handle it is a mistake to consider that they are true "experts" in the fields of such applications. Although on rare occasion a particular examiner can be a prize stinker, by and large the PTO examining corps deserves very high credit for the manner in which practically all examiners conscientiously perform their duties to the best of their abilities. Frequently they go far beyond the requirements of their positions so as to be cooperative and helpful in spite of the conditions of their employment. Because the time they can spend in acting on applications is limited by a PTO imposed quota system, in many ways it is a marvel that they accomplish as much as they do.

Much of the work of a PTO examiner involves judgmental matters upon which knowledgeable individuals can disagree in good faith. If an examiner is in doubt relative to a particular matter such as the allowance of claims in a case he or she is much more apt to decide a close issue in favor of an applicant who has presented an application including claims in a "normal" format and who has prosecuted the case in a normal, non-bombastic, non-insulting manner. The latter cannot be over-emphasized in connection with any application. This is especially the case in connection with an application pertaining to an extension of knowledge relative to subtle energy.

Seldom will an examiner raise any insurmountable objections to the "formal" content of an application required by 35 USC § 112 when the application reasonably resembles other applications which he or she is accustomed to handling. Thus, so long as a patent application pertains or relates to subject matters covered by

prior patents and discloses and claims an invention in approximately the same manner in which such prior patents have disclosed and claimed various inventions there are seldom any serious problems in connection with the manner in which an application is written which cannot be alleviated by appropriate amendment and argument.

The situation is entirely different in connection with an apparently understandable application which an examiner cannot understand or in connection with an application which an examiner believes to contain inaccurate, erroneous, or misleading statements. This is especially true in connection with applications pertaining to truly "far out" subtle energy technology. It does not apply to the vast majority of patent applications pertaining to extensions of normally accepted forms and uses of subtle energies.

These statements can be illustrated with reference to applications pertaining to the subtle energy of magnets as used for various purposes. Many patents have issued pertaining to the use of apparently "subtle" magnetic energy to treat fuels so as to obtain increased power from the use of these fuels. Further, a number of patents have issued relative to the treatment of fluids with what is apparently "subtle magnetic energy" so as to control mineral deposits in water lines. Other patents have issued pertaining to the use of subtle amounts of magnetic energy for other purposes.

A patent of the latter category is the Davis US patent 4,020,590 issued May 3, 1977. It discloses a method and apparatus for using the energy associated with a unipolar magnetic field to benefit the germination and growth of seeds. The nature of the machine contemplated by this patent is indicated by the accompanying reproduction of Fig. 1 of the patent. From the fact that this patent was issued on May 3, 1977, on an application filed Dec. 15, 1975, it is apparent that it practically zoomed through the PTO with little or no prosecution — i.e., no significant problems. Probably all of

the major reasons for this short prosecution are apparent from the patent document.

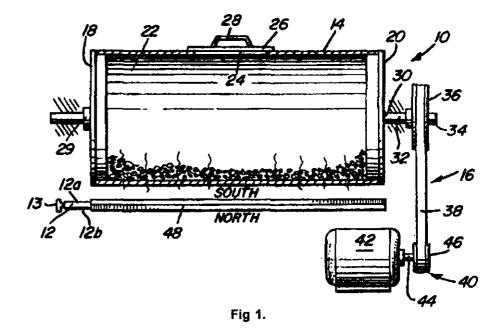
Both the specification and claims of the Davis patent read more or less like the vast majority of other patents. Clearly the examiner handling the case had no difficulty in understanding the content of the Davis application even if he did not understand the manner in which the treatment described was effective in promoting plant growth. The extensive citation of prior art relative to the use of magnetism in treating seeds assured the examiner that the subject matter of the application was of a type having a recognized status in the field of seed treatment. This assurance was apparently enough to overcome any misgivings the examiner may have had relative to the statement about a unipolar field altering the character of water, and other more or less "far out" averments in the Davis specification.

None of these factors relate to questions relative to whether the Davis

application claimed "new, useful, and unobvious" subject matter as required for an application to be patentable. From the short duration of the Davis prosecution it is clear that the examiner handling the application considered that the claims issuing in the patent met all of these statutory criteria. In determining that this was the case the examiner undoubtedly was influenced by the extensive citation and discussion of prior art in the Davis specification. There is a good chance that the examiner considered that he need not make an extensive search for prior art after considering the prior art cited by the applicant.

The differences between the facts in connection with the Davis patent, and those in connection with an abandoned Fregeau application SN 906,790 filed on May 17, 1978, indicate the usual borderline between when an application pertaining to subtle energy is or is not apt to get through the PTO. Although normally all information relative to abandoned applications and their prosecution is held in secret by the PTO, the public has knowledge of this Fregeau application because it was the subject matter of a court action against the head of the PTO seeking to overcome the PTO refusing to issue a patent on the application. This court decision is Fregeau v. Mossinghoff, DC. for DC., 224 USPQ 238, (1984).

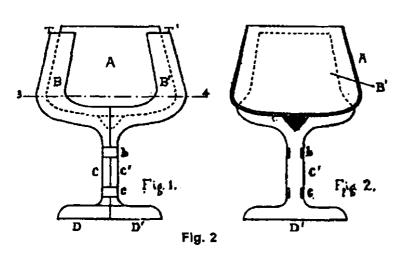
Because of unexpected complications in obtaining a copy of the Fregeau application all statements relative to it in this discussion are based upon the content of the Fregeau v. Mossinghoff decision. The Fregeau application appears to have disclosed and claimed a method for treating variously commonly consumed liquids — including ethanolic beverages — with a magnetic field so as to "increase the specific gravity of the liquid" and to beverages produced by this type of process. The treatment specified was disclosed as enhancing the flavor of whatever fluid was treated. From the decision there is no indication that Fregeau knew of or cited any prior art references suggesting that on the basis of what



Patent# 4,020,590, May 3, 1977, Albert Roy Davis. Apparatus and Method for Exposing Seeds to a Magnetic Field.

others had done that it could reasonably be anticipated that the claimed subject matter might possibly be operative to produce such results.

From the Fregeau decision it is also apparent that there was a question as to whether or not such results were achieved or were achieved to sufficient extent so as to justify the issuance of a patent. Fregeau sought to establish the operative character of his invention in the usual manner using an "expert". His authority apparently was a "dream" of a witness with glowing credentials. Unfortunately for the applicant neither the PTO nor the court which issued the Fregeau v. Mossinghoff decision was significantly impressed by this expert to unconditionally believe him. Seemingly the court considered that "at best" this expert established that the Fregeau



Patent# 655,413, August 7, 1900, H. A. Parkyn. Magnetic Drinking Cup.

invention did produce some minimal or "subtle" taste changes which were so minuscule as not to justify the issuance of a patent.

Regardless of what the "Patent Law" says relative to the issuance of a patent, only a foolish patent examiner or appellate tribunal will allow claims in any fact situation corresponding to this situation in the Fregeau application. The reasons for this are simple. Most individuals have been indoctrinated so as to firmly believe that comparatively weak or "subtle" magnetic fields permeate virtually everything without accomplishing anything which is really significant. The fact that Borderland readers and others know that this is not true is immaterial to the traditional beliefs of a vast majority of the population.

No rational person — and with very limited exceptions PTO examiners are both conservatively traditional and rational — will reject his or her personal belief system by admitting the operative character of something which he or she believes inoperative. This is particularly the case when the rejection of one's own views also goes against widely held views to such a extent as to invite ridicule and criticism. Such beliefs are often particularly hard for an individual to change; they are held with the fervor of religious views. A person who acknowledges the operative character of an invention which nearly everyone else will mentally hold inoperative on the basis of common knowledge and experience risks

serious criticism.

A PTO examiner or judge who goes against his or her beliefs or against established beliefs by permitting the issuance of a patent on questionable subject matter at the edge of recognized technology cannot reasonably expect to escape detrimental reactions to the allowance of any such patent. At a bare minimum, stinging, biting criticism is to be anticipated. For a PTO examiner the consequences of such criticism can be devastating to a career.

Under the circumstances no prudent examiner is going to issue any patent application pertaining to subtle energy which goes contra to established physical laws and conventional beliefs pertaining to recognized technology. The usual way of such an individual avoiding the issuance of such a patent is to literally

"throw the book" at an application which an examiner does not want to issue. The procedure followed in doing this is well established. On occasion it is used when an application is prepared in an abnormal manner making it difficult to examine, or when an antagonistic situation exists between an examiner or examining group and a particular attorney or applicant as well as in connection with subtle energy cases.

In the absence of prior art reasonably showing that an invention lacks novelty the process of asserting all possible grounds as to why an application should not be issued practically always results in the merciless application of the requirement of 35 USC § 101 — that a patentable invention have some utility or "work" and the requirements of 35 USC § 112 relative to what a patent application must contain. Such prior art relative to any "far out' subject matter will seldom be located by an examiner because of the limitations of the PTO.

Rejections and objections based upon 35 USC § 101 and 112 and various PTO Rules related to them can take many confusing, over lapping, and occasionally some what conflicting forms. They are often stated and then restated in different abbreviated manners, and embellished with references to the MPEP and prior decisions in manners effectively blocking an applicant from understanding what really is going on. Explaining PTO actions of this type to an applicant can be most difficult.

The reasons as to why this is the case are related to the precise wording of 35 USC § 101 and 112 and occasionally somewhat distorted logic as to exactly what these sections mean. The first of them is misleading in its simplicity by stating:

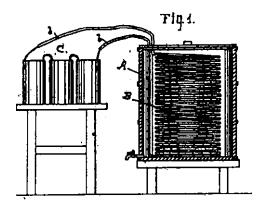
"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent subject to the conditions and requirements of this title."

Critical of the latter are found in the following first two paragraphs of 35 USC § 112:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the

E. J. FRASER.

PROCESS OF TREATING WINES AND LIQUORS BY ELECTRICITY: No. 339,541. Patented Apr. 6, 1886.



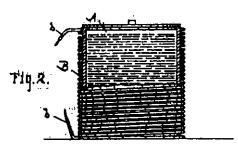


Fig. 3

inventor of carrying out his invention.

"The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention".

Different examiners can legitimately differ as to what these sections 101 and 112 mean. If an examiner is prejudiced in any way — even subconsciously — against the allowance of an application, it seems virtually certain that any doubt about whether or not an application complies with 35 USC § 101 and 112 or any other criteria for patentability will almost always be resolved against the applicant. And they were during the Fregeau prosecution.

In a case where an examiner's judgment could legitimately go either for or against an applicant, affidavits by one or more experts can be helpful in getting a case allowed. The expert used by Fregeau was intended to overcome rejections under both 35 USC § 101 and 112 going to the basic issue concerning the Fregeau application — whether or not the subject matter disclosed and claimed had utility, or stated in another manner, whether or not this subject matter was operative or "worked" for its intended purpose. This is not a foolproof procedure. As in the Fregeau application those considering the case do not have to believe any evidence submitted by an applicant. And they didn't. Presumably this was because they had no basis other than the claims in connection with the application for believing that a beverage could be enhanced with a magnetic field, and because there was nothing in the record fairly suggesting that there was a possibility that such treatment

might be beneficial. Neither of the latter reasons is statutory in character. Both of the latter reasons relate to the usual character traits of those who do their best to consciously process patent applications.

Getting an application on extensions of the utility of subtle energies requires action which will serve to lessen and modify the prejudices against anything which an average person would consider to be "far out". The Davis patent indicates a usually effective procedure for this purpose. The collection of prior art previously discussed makes it clear that Davis knew what was prior art to his invention and where this invention "fit" in connection with the prior art.

This group of references also made it clear that there was at least a reasonable chance that the Davis invention was operative. In effect this prior art reduced the Davis invention from a speculative, pioneer status to the position of a typical limited advancement. Almost never do examiners get in trouble for issuing patents covering the non-earth-shattering improvements which cannot be ridiculed.

Some will argue with the validity of these statements on the ground that there was prior art of record in the Fregeau application and appeal. This is true. But it is also true that the references must not have been directed closely enough to Fregeau's invention to have modified anyone's opinion as to the operative character of the invention or to have indicated that Fregeau's invention was an incremental advancement. These opinions are based on the brief, cursory discussions of these few references in the Fregeau v. Mossinghoff decision. The apparently "best" reference was a French patent which the court held non anticipatory by stating that it "...does not specifically teach that the magnetic treatment would change the flavor or physical properties of the treated liquid...."

Hindsight wisdom indicates that Fregeau would have had an improved chance of getting a patent on his invention if he had done as Davis, and searched and then drafted the application with the search results in hand so as to clearly define subject matter not disclosed by the prior art. Although Fregeau may have searched for material prior art it seems likely that he did not.

This conclusion is based on the writer locating without significant effort in his files the Fraser patent 339,541 issued in 1886; the Parkyn patent 655,413 issued in 1900; and a statement in the third edition of a book Magneto Therapy Self-Help Book by Bansal published in 1987. While the latter is too recent as to be available as a reference against Fregeau there is a chance that the significant statements in it may have been carried forward from the original edition published in 1976.

The statement by Bansal which is significant to the patentability of the Fregeau invention is:

"Magnetism passes through glass, and, therefore milk, water, wine, juice etc., assimilate magnetic effect..."

One can argue what this precisely means and whether the results Fregeau achieve with alcohol containing liquids were inherently achieved by parking a bottle of wine next to a magnet. It is considered that it is a matter of common knowledge that there are a number of older patents such as that to Parkyn (Fig. 2) disclosing magnet-container combinations for holding liquids. It would be surprising if one of more of them mentioned holding wine or another ethanolic beverage.

Probably the most damaging to Fregeau of the noted references is the Fraser patent clearly showing a battery powered coil wrapped around a container capable of holding wine (Fig. 3). The issue with respect to this reference is whether or not it completely anticipates or merely restricts the scope of the Fregeau invention. Fraser at least suggests that ethanolic beverages can be treated with permanent magnets by stating that his invention may be used for, "...treating liquids that may be found to be benefited by electricity or magnetism..." Even if one could legitimately take the position that the use of an electrically powered coil in treating wine and the like was inherently different from the use of a magnetic field from a permanent magnet for the same purpose this reference would be material because of the quoted statement.

The existence of the Fraser, Parkyn and Bansal references in the writers files is virtually a certain indication that there is more prior art to the Fregeau application which could have been located as a result of a reasonable search. There is no way of currently knowing if someone did an inadequate search prior to the filing of the Fregeau application or if this application was filed with no search. There is also a good chance that the PTO did not find the references from the writer's files or other more pertinent references because of either or both of two factors: 1) no one in the PTO had adequate time to search relative to the application because of the PTO pressure on examiner's and members of the Board of Appeals to dispose of applications as rapidly as possible; and 2) those in the PTO who did search for prior art to the Fregeau case not knowing or being able to figure out where to look for such art.

Any one filing a potentially significant case relative to subtle energy is, in the opinion of the writer, foolish to file other than a "normal" or non provisional application without making a significant search for prior art. Almost always such a thorough search will turn up at least one reference related to an invention. With the results of such a search an applicant can judge whether any claims or claims of a commercially desirable scope can be obtained from the PTO.

The latter will relate to: 1) an appraisal as to scope of claims which may possibly be allowed; and 2) whether or not the prior art indicates that the field of the invention has a "status" which an examiner can accept so as to minimize or avoid questions of the operative character or utility of the invention. The search may also suggest a way of drafting an application so as to possibly improve its chances of being allowed by the PTO. In a sense all of these considerations relate to whether or not the filing of any application is worth the cost and energy required.

Particularly in connection with subtle energy applications relating to relatively new "far out" areas of technology, it is prudent not to proceed unless an applicant is well able to afford the probable expense of seeking, maintaining, and enforcing patent protection. These costs can be very significant. It takes serious money to do all of these things. The US patent field increasingly can be compared to an expensive game of chess in which a significant amount is wagered on each move. Such a game is best afforded only by the very rich.



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# INFRASOUND

by John D. Cody

S thunderous tones deepen, their power seemingly intensifies over frail barriers such as glass windows. Certain abrupt thunder peals often shatter windows into tiny fragments. In the apparent absence of thunderous tones we may observe the strong and continuous vibration of glass window panes during storms. A sudden eerie silence, and the window is shattered before our eyes.

Natural phenomena are prodigious generators of infrasound. The potent distal effects produced when natural explosions occur produce legendary effects. When Krakatoa exploded, windows were shattered hundreds of miles away by the infrasonic wave. Wind was not the causative agent of these occurrences, as no wind was felt or detected. Seismographic stations registered the blast, and barometers measured the shockwaves. The "ringing" of both earth and atmosphere continued for hours. It is believed that infrasound actually formed the upper pitch of this natural volcanic explosion, tones unmeasurably deep forming the actual "central harmonic" of the event. The island of Krakatoa was literally lifted into orbit in the fatal blast. Brilliant sunsets followed for many years thereafter, the sad memorial of all the souls who perished.

The power of explosives, in shattering and devastating property, lies in two zones. The first zone is that with which we are principally familiar; the actual blast site, where chemically released gases and metal fragments push back everything in their perimeter. The second less familiar zone extends very much further from the blast site than can be imagined. It is in the powerful sonic wave which expands outward that an equally destructive danger lies. Thick pressure walls of incredible momentum, interspaced with equally thick walls of reduced air pressure, travel far away from the blast site. The blast site is the small destructive zone by comparison. Few objects can survive this destructive tide.

Analysts contend that infrasound is composed of a very broad band of pitches. These tones of immense pressure and duration "accommodate" themselves when encountering resonant cavities. All such resonant cavities are "found and destroyed" when the proper pressure waves flow into their resonances. Rooms, halls, alleys, spaces among buildings, courtyard areas, cellars, subways, sewer chambers; all these burst open into flying fragments when infrasonic waves flood them. Infrasound is the cruel tonal giant, tearing open whatever it finds in its path.

Study reveals that the sudden shock wave of an explosion propels a complex infrasonic signal far beyond the shattered perimeter. Incoherent though such shockwaves may be, their destructive influence dissolves distant walls and windows seconds after the shrapnel has done its deadly work. Objects of all shapes, sizes, and compositions explode when the infrasonic impulse passes through their space. No shield can block infrasound.

Physicists have studied the refuse which remains after an explosive charge has been detonated. Few materials can maintain their integrity. Those objects which manage to survive explosions are noteworthy as infrasonic "resistors". Screen reinforced concrete does not easily succumb to the infrasonic blasts of explosive charges.

#### **EARTHQUAKE**

The sound of Krakatoa exploding up into space, a vertical excess of one hundred miles, succeeded in blasting out windows at a thousand mile radius from the epicenter. Certain earthquake activities produce large and virtually insensate vertical displacements of the ground surface, in extreme instances amounting to a few feet per pulse. In this case, the ground becomes the surface of a drum, ringing out its deadly cadence at infrasonic pitch hours before the event. The ground undulates with infrasonic tones, an elasticity that eventually cracks under the heaving stress.

Ultralow pitch earthquake sounds are keenly felt by animals and sensitive humans. Quakes occur in distinct stages. Long before the final breaking release of built up earth tensions, there are numerous and succinct precursory shocks. Deep shocks produce strong infrasonic impulses up to the surface, the result of massive heaving ground strata. Certain animals (fish) actually can hear infrasonic precursors. Precursory shocks are silent, being inaudible in humans. Animals, however, react strongly to the sudden surface assault of infrasonic shocks by attempting escape from the area. Animals cannot locate the source and center of these infrasonic impulses, behaving in a pitiful display of circular frenzies. The careening motion of wild horses and other domestic animals indicates their fear and anxiety. Poor creatures, neither they nor we can escape the infrasonic source. Encounters with natural infrasound reveal their vast extent, covering hundreds of square miles of surface area.

Certain animals employ infrasound as weaponry. It has been known that certain whales are able to stun their prey with powerful blasts of inaudible sounds. Called "gunshots", whales focus these powerful blasts at large squid and other fish to paralyze and catch them. In some instances, they have been known to burst their prey apart by tonal projection alone. Human experience with these inaudible blasts have been reported. The distress calls emitted by little beached whales was sufficient to push a veterinarian back several feet in the water. Others have experienced these pressure waves, reporting that their hands could not be brought close to the sinal area of small whales because of their inaudible acoustic projections.

Infrasonic shocks produce characteristic pressure effects on structures and organisms alike. The sensation flattens the body. It

is as if one were struck with a solid invisible wall from which there is no escape. There are physiological effects as well. Anxiety, fear, extreme emotional distress, and mental incapacitation are all part of the unpleasant phenomenon. Notable among human exposures to quake-correlated infrasound is the precursory nausea which many report. This strong sensation leaves its more sensitive victims helpless. Feeling the momentary deep motion of the ground strata beneath them, numerous individuals have been used to report these sensations in a bizarre earthquake "alarm system". Unfortunately, physiological reaction to infrasound remains continuous, long after their irritating presence has ceased. The harmfully stimulating influence of infrasound renders physiology permeable and ultrasensitive to every available environmental sensation. The extreme irritability of infrasound victims has been noted.

Earthquake infrasound manifests only at intermittent intervals, producing drastic and sustained negative modifications of consciousness. The human organism continues to reel under intermittent infrasonic assault for numerous reasons. After less than a five minute exposure to low intensity infrasound of 10 cycles per second, dizziness will last for hours. Infrasound of 12 cycles per second produces severe and long lasting nausea after a brief low intensity exposure.

#### **FLOOD**

Surf pounds the shore, producing shocks of 16 cycles per second, just short of the true infrasound range. Ocean waves which pound the atmosphere across huge ocean areas produce an acoustic energy with a mean pitch of 16 cycles per second. The phenomenon of the "barisal guns, fog guns, lake guns" form a well documented bibliography of anomalous acoustic phenomena. These "booming" anomalous tonal phenomena are not isolated to one area or nation. Every nation has accounts of these sea-related mystery sounds. Some regions call them "bay detonations", since they come as abruptly explosive intonations from certain bay areas.

Some of these tones manifest their shocking tones at haphazard intervals. But there are those water-related booms which are periodic, residents near these sites being accustomed to their mysterious occurrence. The strange "explosive" sounds come at certain times of the day, at certain times of the month, and at certain times of the year. There are certain other related anomalous natural tones which ring, hoot, and buzz. Some have been likened to organ tones, tuba blasts, and the deep intonings of very large bells. Bay sizes, wave sizes, and geologic compositions of bays and shores have been woven into complex mechanistic attempts at explaining how these mystery sounds are being generated in certain environments.

The detonation may be caused by a sudden "slapping" of bay water by a singular wave having the "right" breadth and momentum, matching the natural resonant pitch of a bay. The underlying bay rock matrix may resound in the manner of a bell, gong, or cymbal. The geological composition of the bay plays the greater part of the effect, sudden winds or water surges knocking the natural "sounding board". These natural bay tones have great infrasonic content.

The infrasonic outputs of the mystery tones are significant. Each of these phenomena produce a range of very low pitch tones. These booming sounds have rattled windows and rocked some small

towns. Animals are startled by their inaudible precursors, and humans are often dizzied after their manifestation for hours. In several areas, people are hospitalized by the "boom" related illnesses

Waterfalls are notorious generators of infrasound. Numerous susceptible visitors at Niagara experience a peculiar nausea which is not associated with the normal fear of heights. Thundering cataracts produce strong infrasonic shocks to which mile exposure stimulates the common malady. Lake ice and glacial ice produce deep booming sounds which ring for hours, behaving as large tympanic surfaces. The thunderous sounds associated with these occurrences produces infrasound of pitch related to ice surface mass, breadth, and length alone. Antarctic research experienced nausea in relation to ice related sounds.

Tidal waves and other sudden variations of water surfaces produce large magnitude "seiche" waves. These have been sighted by ocean going ships, where oceanic surfaces have drastically changed elevation in an incredibly short time. Ships "drop" into such huge ocean troughs and rise again after the wave passes. In dropping, some have crashed to the very rock bottom of their bays, only to be lifted in pieces when the wave resurged. Film footage of the great and horrid Alaskan Earthquake (1964) reveals this devastating sea "drop-out".

Upon such lethal seiche tides, even in the fortunate absence of earthquakes, comes nausea and other coastal related illnesses. Large intensity infrasonic sea shocks have their powerful effect on the overlying atmosphere of their regions. These infrasonic shockwaves travel for long distances. Certain bays are known for the high incidence of such illnesses, the result of resonant baywater "heavings" which occur daily. Their sickening effects are seemingly "stored up" in physiology, lasting for hours. While these phenomena proceed from deep in the heart of earth, and on its surface, there are phenomena which generate infrasonic sources...from space.

#### **FIRE**

Aerial earthquake sounds have been reported by observers. Such rushing, thrumming sounds seem to come from "everywhere" above the affected locale. Typical of infrasound, the sources cannot be accurately located.

When Krakatoa exploded, barometers fluctuated rapidly in short time intervals. It was recognized that a new means for detecting earthquakes and other earth movements had been found. The horrifying destruction of Krakatoa prompted the emergence of a new science. The rapid development of sensitive barometric instruments provoked the discovery of a whole new "infrasonic world".

The opposing nations of the Cold War years used barometers and seismographs in determining the relative explosive yield of periodic underground atomic blasts. Sensitive barometric detection gradually began searching the atmosphere and earth for infrasonic "events". Mysterious and sudden barometric variations indicates that natural infrasonic generation has a much wider source than the subterranean earth. Infrasounds associated with the Aurora Borealis are too numerous to mention, a well chronicled occurrence.

The aurora borealis is heard to "swish, crackle, sizzle,

and...thunder". Quantitative analysts "cannot understand" how these sounds can be "heard" but not recorded. It is obvious that certain auroral sounds stimulate physiological responses which will never register in biologically unmodified electronic systems. Though debates continue when referring to higher auroral tones, the "thunder" of the aurora stimulates aerial infrasounds which can be measured.

Low level auroras have been actually seen and felt. The sounds and odors associated with this rare phenomenon are unmistakable. In one instance a chemist was fortunate enough to have lived, after witnessing the effect of auroral grounding throughout his laboratory. The incredible luminescence produced in several platinocyanides, electro-phosphorescent chemicals, were duly noted and reported. Another such incident involved the grounding of the aurora into an elevated radio tower. The radio engineer suddenly heard a crackling sound "from everywhere", was unable to transmit any signal power, felt completely electrified, smelled ozone everywhere, and heard the "crackling" sound. Numerous witnesses who saw the event, describing the colored column of light which suffused the tower, feared he might have been killed by its power.

The auroral high pitched sizzling sounds are augmented by deep and ominous thrumming. These deep tones sweep through the bodies of listeners who are fortunate enough to survive the dangerous encounter. These permeations produce an irritability and a dizzying nausea. These sounds were always equated with evil by the Eskimo. Their legends of the aurora are always fear-filled. The trademark of anxiety and dread highly characteristic of infrasonic influence, their tales also recount the "taking" of souls by the "ground walking" aurora. English observers reported that the

aurora actually "swept along the ground" like a column descending from the sky. It took a multicolored appearance all along its meandering path.

Blasting through interplanetary space, solar flares assault the earth with a barrage of stupendous proportion. Their disturbing effect on electrical systems is historically noted. The appearance of electrical power surges during solar flare events has amounted to many hundreds or even thousands of amperes line-induced current. Northern lands design their power systems to accommodate these periodic manifestations of great power. Oil lines in northern lands must be carefully grounded and insulated to prevent the continuous induction of such harmful electrical surges. Standing arcs of brilliant blue current had been observed upon the surface of loose pipe joints during solar flares and strong auroral episodes.

Few writers have discussed the intermittent effects of solar flares on atmospheric pressure. The sudden changes noted in air pressure, which cover many thousands of square miles, are obviously sourced in the solar wind. The effect of this natural atmospheric assault has defined and disturbing influence on both the weather and human behavioral patterns. Some 139 solar flares were recorded between 1980 and 1983. There is a statistical 155 day periodicity in solar flares, a rhythm often violated by several interstitial flares. Principally used for predicting their expectable effect on radio communications, specific military observers monitor solar flares with continued concern. Correlations of flares with jet stream behavior is strong.

Jet stream behavior, in its meanderings and undulations across vast geographic regions, is not mysterious when considering the intermittent effect of solar flares and the normal "background"

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bursting of the solar wind. Travelling at thousands of miles per hour, flare pressures aperiodically barrage the neutral atmosphere. The explosive influence of vast power shocks the entire weather system, electrically active flare disturbances violently disrupting all atmospheric processes. The very obvious outlines of flare contacts with the atmosphere can be traced as major pressure changes on weather maps. Solar flare impacts strike the earth like a bell. Auroras result, and have been correlated with thunderstorm activities.

But continual minor background disruptions also exist, propelled by the sun. In its normal process, solar expulsions do not arrive at the atmospheric boundaries as a homogeneous pressure wave. The arrival of solar products comes as a pressure wave of inconsistent density. This intermittent barrage induces harmonic atmospheric disturbances which continually modify and chaoticize emerging weather patterns. The effect is exactly like "thrumming" an evenly sanded drumhead with innumerable impacts. This imprint of "background" pressure waves, rattling daily upon the atmosphere from solar winds, can be seen as "Chladni" patterns on weather maps.

Both solar flares and the normal thrummings of the solar wind generate infrasonic pulses throughout the atmosphere. The infrasonic shockwaves of the aurora are normally not heard, but definitely sensed. Measurements have registered a continual infrasonic background noise level. This pressure energy emanates "from above" atmospheric strata, radiating downward in large patterns. Atmospheric infrasound is most strongly measured during daytime hours, a clear indication of their source in the intermittent expulsions of solar wind. Atmospheric infrasounds arrive at measuring stations with pitch between .67 and 1.5 cycles per second. Their pitch continuously oscillates between .67 and .83 cycles per second. These solar sourced infrasonic impacts very definitely correlate with sudden swings in human behavior, having very obvious sociological implications. The energetic content of atmospheric infrasound represents a vast and untapped potential.

#### WIND

Infrasound moves, unaffected, through and across both winds and storms. But wind and storm can generate infrasound. The powerful harmonic rotations of storms shears the atmosphere, radiating a cyclonic series of expanding infrasounds. The sense of impending fear which proceeds hurricanes is due to infrasonic emissions. The infrasound of seasonal winds and weather patterns produces illness in certain persons. Some individuals can hear the jetstream and its thunderous pitch, peaking between 30 and 40 cycles per second. More and more populations are reporting the persistence of ultralow pitch sounds which render them weak and fatigued. Having often unexplained sources, we find the bibliography flooded with cases of persistent 'atmospheric...and underground sounds".

Victims of such infrasonic assaults report severe stomach upsets associated with such infrasounds. Persons who report these persistent "underground" rumbles often live in a very localized region. These loci have been as small as six miles in diameter. Wind shear action between the rapid jet stream (.75 miles per second) and more quiescent lower air strata might continuously generate this persistent infrasound. Natural infrasonic generation is difficult to determine in all cases where it has been detected. Clashing winds may produce such sustained low pitches by misunderstood "shearing" actions, similar to Von Karrman vortices.

Wind shearing may be modified by local topology. Mountain ranges of specific geometry may offer the most plausible explanation for infrasound in certain areas. Their obstructive presence among regionally prevailing winds may produced sustained aerial vortices from which infrasounds continuously radiate.

Why however does the infrasound focus on certain ground points? Some theorists claim that wind enters caverns, producing an immense artificial whistle of infrasonic resonant pitch. Careful examinations of these caverns reveals infrasonic pitch of 20 to 30 cycles per second which does not "regisister" on tape recordings. Some have suggested that these infrasounds are only sensed in physiology, being "electrostatic" in nature. They also claim that the incidence of ground-focussing infrasound is an electrical manifestation, the result of emerging terrestrial charges in highly localized regions.

How does sustained infrasound affect manmade structures? Gusting wind has often applied such instantaneous pressure to manmade artifice that strong rock walls fall flat in tiny pieces. These sudden events often occur when winds seemingly ceased for an instance. During that brief interval, windows are often blown through, and walls are toppled by infrasonic impulse.

What is the sustained influence of infrasound on humans and human behavior? Mysterious desert humming sounds fill the night of nomads with superstitious dread. Deep, buzzing, and threatening, these continuous humming tones have produced anxiety and fear among bedouins for centuries. The "ghost wails" appear in the mythology and folktales of the desert people.

But these deep and virtually inaudible humming tones are not confined to the desert plains, where they thrash among themselves across sandy dunes. The Mistral, the northward winds of the African continent, sweeps over the southern Mediterranean coastlands during late fall. These familiar hot winds emerge from their desert journeys with a strange power, lasting throughout the winter. These winds leave an indelible trace among exposed communities, a phenomenon which has been misunderstood for centuries.

The Mistral, weak in infrasonic intensity, does not wreak havoc with material structures. But the Mistral works its permeating harm nonetheless. For the inhabitants of certain coastal areas, the low intensity infrasound of the Mistral brings with it a peculiar seasonal anxiety and depression. In certain locations across the Mediterranean coastland there are individuals who suffer from "seasonal nervous exhaustion" and other "neurophysical maladies". It is known that whenever the Mistral blows, there will be increased emotional tension, depression, and irritability. The Mistral, in numerous cases, has produced fatalities.

Infrasound travels long distances, often exceeding one thousand miles, with virtually no attenuation. Its pressures thus arrive at great distances with the same force and intensity as when generated. A deadly pressure. The atmosphere sustains prolonged and powerful infrasonic vibrations. How natural conditions can systematically modify human behavior for protracted seasonal periods is frightening. How natural conditions can systematically modify large-scale social behavior for protracted seasonal periods is equally frightening. Not much acoustic power is required for infrasound to produce such extreme and sustained physiological symptoms.

Fohn winds are dry and warm southerly winds which traverse the Alpine regions of Europe. Fohn weather is characterized by clear skies, high visibility, and dry atmosphere. Studies of "Fohn weather" and the Mistral alike have revealed some intriguing and frightening statistical correlations. The biological effects of both Mistral and Fohn weather have been well documented. These include extreme irritability, accident-prone loss of objective judgement, slight disorientation, mild nausea, and diarrhea.

It is an established fact that sustained low intensity infrasound alters human behavior and health. Higher accident rates are correlated with pre-Fohn weather onset. This high accident rate rises until the establishment of Fohn weather, having been attributed to the infrasonic content of the winds.

#### **ENGINES**

Vibrating manmade structures stimulate the artificial generation of dangerous infrasound. When turns are made at 60 miles per

hour, car chassis vibrations produce a peak infrasonic emission. Travel sickness can be associated with prolonged infrasonic exposure to any vibrating chassis. Cars, buses, trains, motorcycles, and jets alike each register hazardous intensities of infrasound. Each transportation mode has its characteristic infrasonic pitch, the necessary outcome of mechanical frictions and inertial resistances.

There is difficulty in recording and reproducing ultradeep tones for study and analysis. They have to be generated on site for experimental purposes. Theater-sized sound systems can never completely transmit all of the sensations associated with naturally occurring infrasound. But there have been instances where audiences have become frighteningly ill because of the accidental generation of infrasound in a theater space.

Of critical importance is the comprehension of human tolerances to infrasound. Military medical teams have long studied the effect of machine vibration on human judgement and behavior out of necessity. If jet pilots and rocket pilots alike evidence even minor errors in judgement through their exposure to infrasound, disaster can result. Certain critical errors in judgement and accuracy have in fact been noted during short flight times.

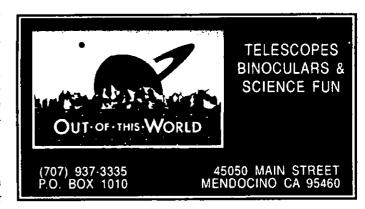
The powerful infrasonic vibrations of jet chassis absolutely saturate the bodies of pilots. Continually saturated with these infrasonic energies throughout their flight time, pilot reflexes are severely diminished. Military procedure recognizes this factor, and routinely limits flight time. It is known that excess infrasonic exposures endanger pilots and their flight missions. Pilot damaging effects include decrements in vision, speech, intelligence, orientation, equilibrium, ability to accurately discern situations, and make reasonable decisions.

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